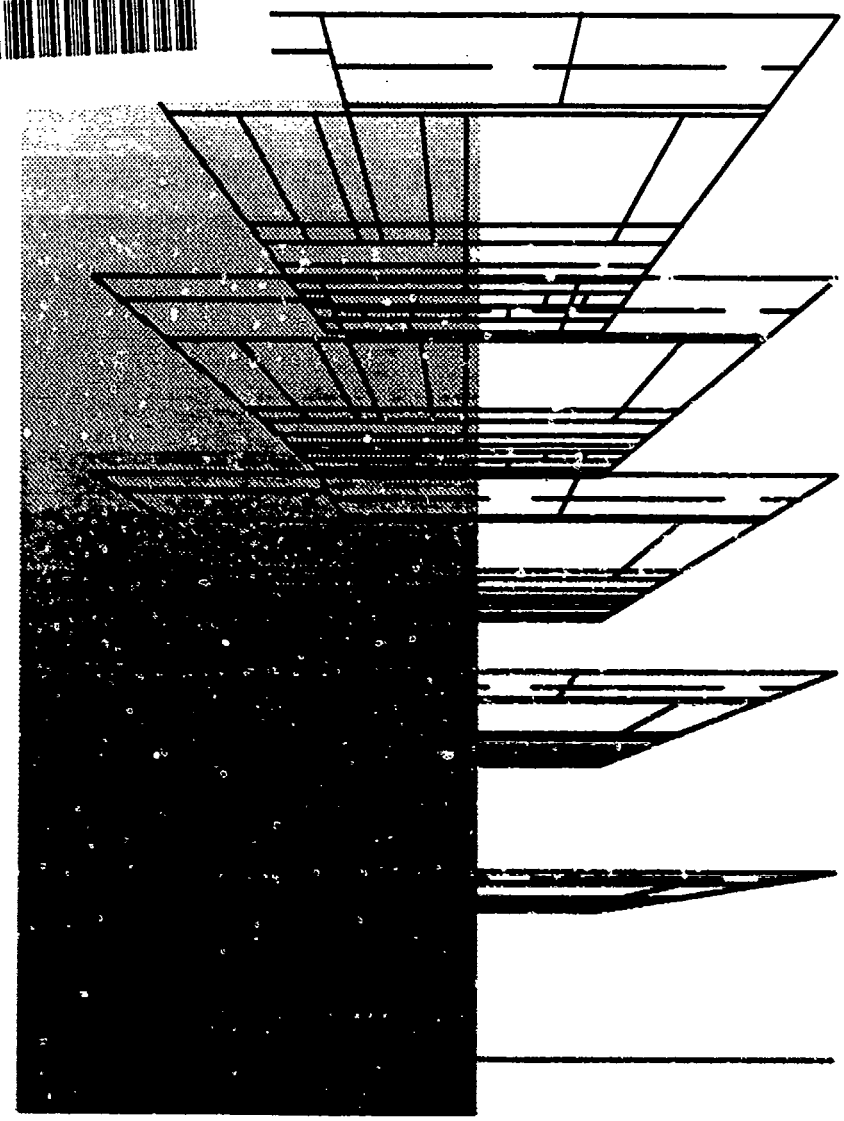
(2)

Paperless

Material Inspection and Receiving Report

A Strategy to Streamline Acquisition and Reduce Paperwork



Stephen Luster

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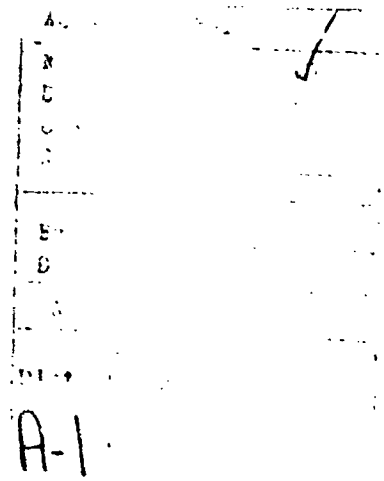
PAPERLESS MATERIAL INSPECTION AND RECEIVING REPORT

A Strategy to Streamline Acquisition and Reduce Paperwork

Report AF005R1

March 1991



Stephen Luster

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Executive Summary

PAPERLESS MATERIAL INSPECTION AND RECEIVING REPORT

The Department of Defense is committed to streamlining the acquisition process to increase productivity in both the public and private sectors. One modern method to streamline business practices is to convert paper-based systems to automated processes using the techniques of electronic data interchange (EDI), as defined by the American National Standards Institute (ANSI).

To this end, DoD sponsored an examination of the feasibility of converting the widely used, paper-based *Material Inspection and Receiving Report* (MIRR), DD Form 250, into an electronic, paperless system. This report presents the case for conversion to EDI, and because of time and resource constraints, recommends a phased implementation.

Our report outlines existing inspection and acceptance policy, the various uses of the MIRR, and MIRR preparation and distribution requirements. We found that the paper-based MIRR and the Military Standard Contract Administration Procedures (MILSCAP) Shipment Performance Notification (SPN) carry similar data and serve similar purposes, leading us to conclude that the MILSCAP SPNs could be replaced by an EDI-based MIRR. We recommend that DoD examine inspection and receiving report data requirements in order to take advantage of the economies and streamlining potential (such as reduced data requirements) afforded by EDI-based systems. Apparently, too many copies of the MIRR are being sent to some locations and other locations need only a limited number of data elements because they already have most of the information in their data bases. Bar codes could also be used to improve the process. We believe that the recommended improvements will facilitate more timely closeout of contracts and the deobligations of remaining funds on those contracts.

We found private-sector initiatives examining EDI applications for the DD Form 250 that parallel those in DoD. We also found considerable enthusiasm in the private sector for an EDI-based MIRR, and we believe that a DoD initiative is all

that is needed to enlist the private sector in the conversion. We found other ongoing initiatives within the DoD. These need to be consolidated for uniformity so that the DoD will present one face to industry.

We believe that several existing EDI standards are practical for DoD use although each will require some modification to conform to current MIRR policy. Because the modifications are types commonly adopted by ANSI, we see no impediments to achieving standard transaction sets. We provide draft mappings to several existing standards and recommend other standards that also appear applicable to the MIRR.

The road to a paperless MIRR will be challenging. The adaptation of shipment notice and invoice uses of the MIRR and their data requirements can be made with relative ease. However, conversion to a paperless MIRR depends upon the resolution of issues in many areas, among which are current communications and process reliability, electronic signatures, authentication safeguards, and use by small businesses. The DoD must address these issues. We have recommended a strategy to convert the MIRR to a paperless system and we have provided a definitive list of the issues attendant to that conversion. Despite the challenges, we believe there is a clear case for phased conversion to an EDI-based MIRR and we recommend that the DoD begin that conversion.

A word of caution is in order: conversion of one paper-based form – the MIRR – does not constitute an EDI system. The "system" is the acquisition process. Thus, it is essential for the DoD to develop initiatives like the MIRR within an overall context of a paperless acquisition process in order to obtain the maximum benefit of such ongoing initiatives.

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CHAPTER 1

INTRODUCTION

BACKGROUND

The Department of Defense's commitment to streamlining the acquisition process is evidenced by the DoD policy to make "... maximum use of electronic data interchange (EDI) for the paperless processing of all business-related transactions, and ... to take steps that will result in acceptance of EDI as the normal way of doing business...."[1]

Putting Policy into Practice

The DoD has continued to find new ways to use the capabilities of EDI in such significant efforts as the OSD Modernization of the Defense Logistics Standard Systems (MODELS) project and the Defense Logistics Agency's (DLA's) development of an electronic ordering system (SPEDE).[2] Such could be the case with the DoD *Material Inspection and Receiving Report* (MIRR) (DD Form 250 Series). (See Appendix A.)

Conversion of DD Form 250

A recent Logistics Management Institute (LMI) study of candidates for electronic commerce, indicated that the MIRR, DD Form 250, was a DoD form with high annual usage.[3] Streamlining the shipment notice and invoice uses of the MIRR offers an attractive cost reduction and efficiency improvement incentive for the private sector as well. The business case for converting the MIRR and other widely used forms into EDI was made in the same LMI study. This report describes the current functions of the MIRR and recommends a concept and the procedures to use

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[1]Deputy Secretary of Defense Policy Memorandum, May 1988.

[2]SAMMS (Standard Automated Materiel Management System) Procurement by Electronic Data Exchange.

[3]LMI Report DL001-06R1. *A Business Case for Electronic Commerce*. Hardcastle, Thomas P., and Thomas W. Heard. September 1990.

EDI for material inspection, acceptance, and receiving of goods and services provided by contractors.

REPORT ORGANIZATION

Chapter 2 identifies the DoD policies governing inspection and acceptance. Additionally, we briefly discuss the MIRR forms.

Chapter 3 identifies responsibilities for preparation and distribution of the MIRR. Also, in this chapter, we document the current uses of the MIRR and provide several composite paper flows which support various MIRR uses.

Chapter 4 discusses changes in business practices required when making the judgment to convert MIRR uses to EDI technology. This chapter puts the EDI-based MIRR into a context of an overall system of electronic procurement. Chapter 4 concludes with a discussion of ancillary issues which DoD should address when planning for successful EDI implementation.

Chapter 5 discusses the selection of candidate standard transaction sets and parallel initiatives.

Chapter 6 contains a proposed strategy for the phased conversion to an EDI-based paperless MIRR. The chapter concludes by providing a series of recommendations designed to guide the DoD decision process leading to the introduction of a paperless MIRR.

Appendices containing the basic MIRR form, MIRR distribution tables, rough draft mappings to several existing transaction sets, and other suggested transaction sets for DoD consideration, accompany the report.

CHAPTER 2

DoD POLICIES GOVERNING INSPECTION AND ACCEPTANCE

INSPECTION AND ACCEPTANCE REQUIREMENTS AND POLICY

Federal Acquisition Regulation Requirements

The Federal Acquisition Regulation (FAR) states that "... Agencies shall prescribe procedures and instructions for the use, preparation, and distribution of material inspection and receiving reports ... to evidence Government inspection and acceptance....[1] The FAR also states that "... Government inspection ... shall be documented on an inspection or receiving report form or commercial shipping document/packing list, under agency procedures...."[2]

Regarding acceptance, the FAR states that "... Acceptance shall ordinarily be evidenced by execution of an acceptance certificate on an inspection or receiving report form or commercial shipping document/packing list...."[3]

The DD Form 250 series was devised to meet these inspection and receiving report requirements.

Defense Federal Acquisition Regulation Supplement Requirements

The DoD implementation of the FAR is contained in the Defense Federal Acquisition Regulation Supplement (DFARS).[4] Appendix I of the DFARS contains the DoD procedures and instructions for the use, preparation, and distribution of the MIRR and suppliers' commercial shipping/packing lists used to evidence Government contract quality assurance.[5]

---

[1]FAR 46.6 – *Material Inspection and Receiving Reports.*

[2]FAR 46.401(f) – *Government Contract Quality Assurance. General.*

[3]FAR 46.501 – *Acceptance. General.*

[4]DFARS 246.6 – *Material Inspection and Receiving Reports.*

[5]DFARS 246.670 – *General.*

DoD Policy on the Use of MIRRs

It is DoD policy that "...MIRRs are used to document contract quality assurance, acceptance of supplies and services, and shipments...[6] (and) the provisions of Appendix I (of the DFARS) are applicable...when the Material Inspection and Receiving Report clause...is included in the contract,...[7] unless otherwise specified in the contract...."

DoD policy also states that contracting officers "...shall insert...(a MIRR clause)...in solicitations and contracts when delivery of a separate and distinct object or entity, whether separately priced or not, is anticipated...."[8]

When contract administration is retained by the contracting office, the clause is not required in certain situations unless the use of the MIRR is desired by the contracting officer.[9]

The MIRR clause in its present form has existed since December 1969. It is a short clause which specifies that:

> At the time of each delivery of supplies or services under this contract, the Contractor shall prepare and furnish to the Government a Material Inspection and Receiving Report in the manner and to the extent required by Appendix I, "Material Inspection and Receiving Report" (see DoD FAR Supplement 246.670).[10]

THE MIRR FORMS

The DFARS contains three forms used in the inspection and acceptance process:

- DD Form 250: *Material Inspection and Receiving Report*
- DD Form 250c: *Material Inspection and Receiving Report – Continuation Sheet*
- DD Form 250-1: *Tanker/Barge Material Inspection and Receiving Report.*

---

[6]DFARS 246.671(a) – *Policy.*

[7]DFARS 246.671(b) – *Policy.*

[8]DFARS 246.370 – *Material Inspection and Receiving Report.*

[9]DFARS 246.370 (a – h) – *Material Inspection and Receiving Report*

[10]DFARS 252.246-7000 – *Material Inspection and Receiving Report* (December 1969).

The DD Form 250 is the basic inspection and acceptance document. The January 1990 version of the form, the one referred to in this report as the MIRR, is provided in Appendix A. The data elements contained in this version are the basis of the draft transaction sets presented in Appendix C.

The DD Form 250c is a continuation sheet to the basic DD Form 250. Except for several control data elements needed to ensure a cross-reference to the basic form, the DD Form 250c provides additional space for continuing with item numbers and descriptions when there is not enough space on the basic form. The concept of a "continuation sheet" is not relevant when converting a paper form to a variable-length EDI transaction as long as potential length is considered during transaction construction. For that reason, the DD Form 250c was not considered further in this report. However, should the DoD adopt EDI technology to replace the paper-based MIRR, provisions must be made to ensure that transaction construction and communications protocols allow for transmission of transactions in EDI format that duplicate the information on the paper-based MIRR, including the continuation feature.

The DD Form 250-1 which documents the loading and discharge of tankers and barges was not considered in this study because its use was significantly less than that of the basic MIRR. The DD Form 250-1 can be adapted to a standard transaction set with little additional effort.

CHAPTER 3

PREPARING, DISTRIBUTING, AND USING THE MIRR

MIRR PREPARATION

Contractor

The DFARS states that when required, "... The contractor shall prepare the MIRR with the exception of those entries required to be completed by the authorized Government representative...."[1]

The requirement for contractor preparation of the MIRR (DD Form 250) is also contained in the Material Inspection and Receiving Report clause which states that "At the time of each delivery of supplies or services under this contract, the contractor shall prepare and furnish to the Government a Material Inspection and Receiving Report in the manner and to the extent required by Appendix I...."[2]

Authorized Government Representative

Three entries on the DD Form 250 are to be completed by authorized Government representatives:

- PQA (Procurement Quality Assurance)/Acceptance at Origin (Block 21A)
- PQA/Acceptance at Destination (Block 21B)
- Receiver's Use (Block 22).

Block 21 of the MIRR documents Government PQA and/or acceptance. Typically, the date is entered in the block and the MIRR is signed by an authorized Government representative. Sometimes the basic data has already been inserted in Block 21 by the contractor preparing the MIRR. Under present policy, when evidence of Government PQA/acceptance is required, the MIRR is signed in Block 21 by an authorized Government representative.

---

[1]DFARS I-101(c) - *General*.

[2]DFARS 252.246-7000 – *Material Inspection and Receiving Report* (December 1969).

When PQA and/or acceptance, regardless of where accomplished, do not conform to the contract, or when the quantities received were not in good condition, the authorized Government representative may make appropriate notes on the DD Form 250 itself or on supporting documents.

When the quantity received by the Government is different than the quantity shipped as specified in Block 17 on the DD Form 250, the authorized Government representative enters and circles the actual quantity received directly below the quantity shipped entered in Block 17. These procedures are important and must be factored into any EDI version of DD Form 250.

Contractor or Autnorized Government Representative

Block 22 is used by the Government or authorized contractor receiving activities to document receipts and, if necessary, note exceptions. The block is usually prepared and signed by an authorized Government representative but may be signed by an authorized contractor.

MIRR DISTRIBUTION

The DFARS Requirement

The DFARS states that "...the contractor is responsible for distribution, including mailing and payment of postage, of the DD Form 250...." The DFARS also requires that unless the contract has different requirements, distribution of the DD Form 250 must follow and is limited to the distribution lists contained in two tables in Appendix I of the DFARS.[3]

In Appendix B to this report, we illustrate the standard and special distribution tables. The standard distribution table requires preparation of 8 to 13 copies of the MIRR. The special distribution table adds requirements for copies unique to the Service/Agency in addition to the standard distribution. Copies required by the contractor are in addition to those required for standard and special distribution.

We believe that current DoD automation and data distribution capabilities will support a reduction in the number of distribution copies required by Appendix I.

---

[3]DFARS 1-401 – *Distribution*.

Purchasing Office Additional Distribution

We found that purchasing contracting officers (PCOs) can modify the standard MIRR distribution requirements specified in DFARS Appendix I. This is accomplished by inserting special provisions into contracts.

For example:

> . . . *In addition to the* requirement of DoD FAR Supplement Appendix I:
>
> a. . . . The Contractor shall forward one (1) copy of the shipping document (DD Form 250) to the National Inventory Control Point/Inventory Control Manager. . . .
>
> b. When the solicitation includes Foreign Military Sales (FMS) requirements, the Contractor shall forward one (1) copy of DD Form 250 (MIRR) and one (1) copy of the shipping document to the Foreign Military Sales Representative. . . .
>
> c. When the solicitation includes Maintenance and Overhaul requirements, the Contractor shall forward one additional copy of the DD Form 250 (MIRR) to the following address:

Another example:

> . . . *DD 250 Distribution*. . . .
>
> (c) When . . . [activity X] is the status control activity two copies of each DD 250 shall be furnished by the contractor to:
>
> (d) Where the status control activity/inventory control manager is an agency other than . . . [activity X], one copy of each DD 250 shall be furnished by the contractor to:. . . .

Although special provisions are useful to clarify precise distribution addresses, they can create a "hidden" distribution list that will have to be identified when converting to EDI.

MIRR USES

DFARS Appendix I states that the MIRR has multiple uses:[4]

- PQA at origin
- PQA at destination
- Acceptance at origin

---

[4]DFARS I-103(a) (i – viii).

- Acceptance at destination
- Packing list
- Receiving
- Shipping
- Contractor invoice
- Contractor commercial invoice support
- Contractor internal use.

Ignoring contractor internal uses, which were not included in our study, MIRR use can be divided into four major categories supporting the activities shown in Table 3-1. Other uses or distribution requirements of the MIRR such as packing list, invoice support, and copies required to be sent with the shipment, must be handled as changes to DoD policies and/or business practices. These issues are addressed elsewhere in this report.

TABLE 3-1

PRINCIPAL MIRR FUNCTIONS

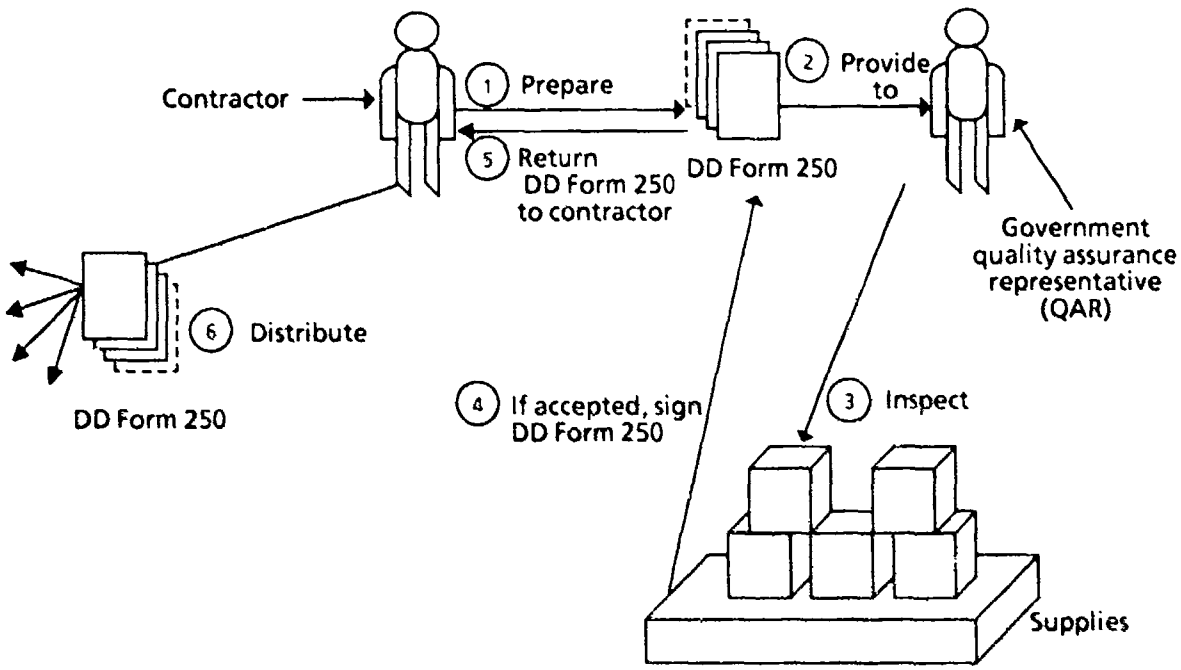
Categories of use	Activity supported
Shipping	Shipping documentation, packing list
Invoicing	Contractor invoice
Receiving	Receiving report, packing list
Inspecting	PQA/acceptance at origin or destination

Our research revealed that contractors who produce large volumes of MIRRs tend to prepare MIRRs the same way, regardless of their intended use. This occurs because MIRRs are usually produced from a contractor data base by a single contractor software application program or typed in multiple copies, in accordance with company policy developed without regard to how any given copy of the MIRR is to be used. Contractors prepare additional copies in the same "standard" format when needed. In other words, MIRRs used as shipping documents, packing lists, or invoices tend to look the same.

Acquisition management can be considered an indirect use of the MIRR. DoD acquisition managers use MIRR data to track procurement status and the availability of supplies. While the management uses of the paper-based MIRR were not in the scope of this study, DoD managers will still require in the EDI environment, some information provided now by the paper-based MIRR. When plans to transmit MIRR data in EDI format are made, the data must also be sent to data bases accessible to acquisition managers in addition to the traditional recipients.

HOW THE MIRR IS PROCESSED

Figure 3-1 shows the typical steps leading up to contractor distribution of the paper-based MIRR.



Note: In the illustration, we assumed a non-Grant Aid/FMS, source-inspected contract, administered and paid by the DLA, not involving a Certificate of Conformance, Alternate Release Procedure, or fast payment; with a MIRR executed without exception, by an authorized Government QAR

FIG. 3-1. DD FORM 250 SIGN-OFF BEFORE DISTRIBUTION

In our survey, we found that Service and Agency activities do not process paper MIRRs in exactly the same way at every location. Based on the information we gathered at site visits, we present diagrams showing a variety of paper-based MIRR flows.

Starting with a baseline of the standard DFARS distribution of the MIRR, shown in Table 3-2, we followed the actual distribution copies to discover if the standard distribution was being followed, and what use was made of the copy(ies) received. To illustrate, a discussion with one Defense contractor revealed the MIRR distribution to a contract administration office (CAO) shown in Figure 3-2.

TABLE 3-2

MIRR STANDARD DISTRIBUTION

Recipient	Number of copies
Destination, with each shipment	Four
Consignee (via mail)	Two
Contract administration office	One
Purchasing office	One

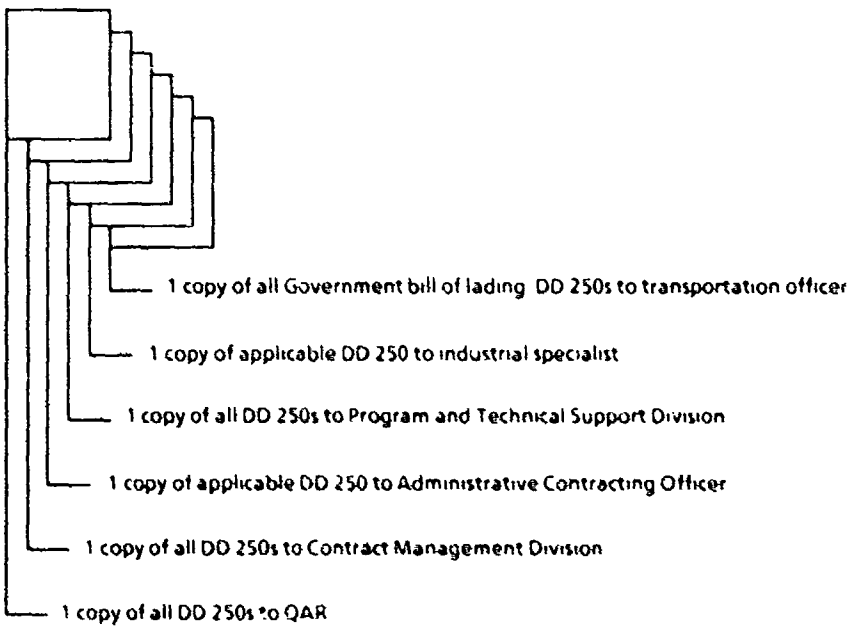


FIG. 3-2. CONTRACTOR DISTRIBUTION OF MIRR TO ONE DoD PLANT REPRESENTATIVE OFFICE

Shipping and Receiving

When deliverables were not accepted by the Government QAR, the DD Form 250 was returned unsigned to the contractor. When acceptance took place, the DD Form 250s were signed and returned to the contractor for distribution. Four copies of the MIRR were sent with the shipment. We then tracked those distribution copies to destination. Figure 3-3 shows the disposition at one receiving activity, of the copies that traveled with the shipment. The consignee signed and returned one copy of the four copies sent with the shipment to the delivery agent. This action indicated proof of delivery and provided an audit trail. We believe that the bill of lading or other document could be used for this purpose instead of the DD Form 250.

We found that these actions occurred after a shipment was processed through the loading dock. (See Figure 3-4.)

- The consignee's processing clerk needed information from only one copy of the DD Form 250 to enter into a data base.
- When applicable, one copy of the DD Form 250 was signed and sent to the CAO to verify destination acceptance. When acceptance was made at origin, one copy appeared to be extra.
- After processing, a copy of the DD Form 250 was "archived" by imaging on an optical disk. The paper DD Form 250 was then destroyed.

In addition to sending copies along with the shipment, contractors mailed two copies to the consignee. These copies appeared to be superfluous in some applications because copies accompanying the shipment were available, and/or an electronic shipment performance notice (SPN) had been received from DLA. These information sources, with appropriate data base interconnectivity, should be adequate to update all required data bases.

We believe that the information taken from one copy of the MIRR (stock number and last four digits of the contract number) could be bar-coded and used to automatically update data bases at the point of reception. This would eliminate (or at least reduce) the copies sent with the shipment.

The foregoing scenario raises the question why are so many copies of the DD Form 250 being sent to the same general location, when only a few copies and limited data are needed? LMI believes that automated applications have outstripped the MIRR distribution specified by DFARS Appendix I. This may not be universally

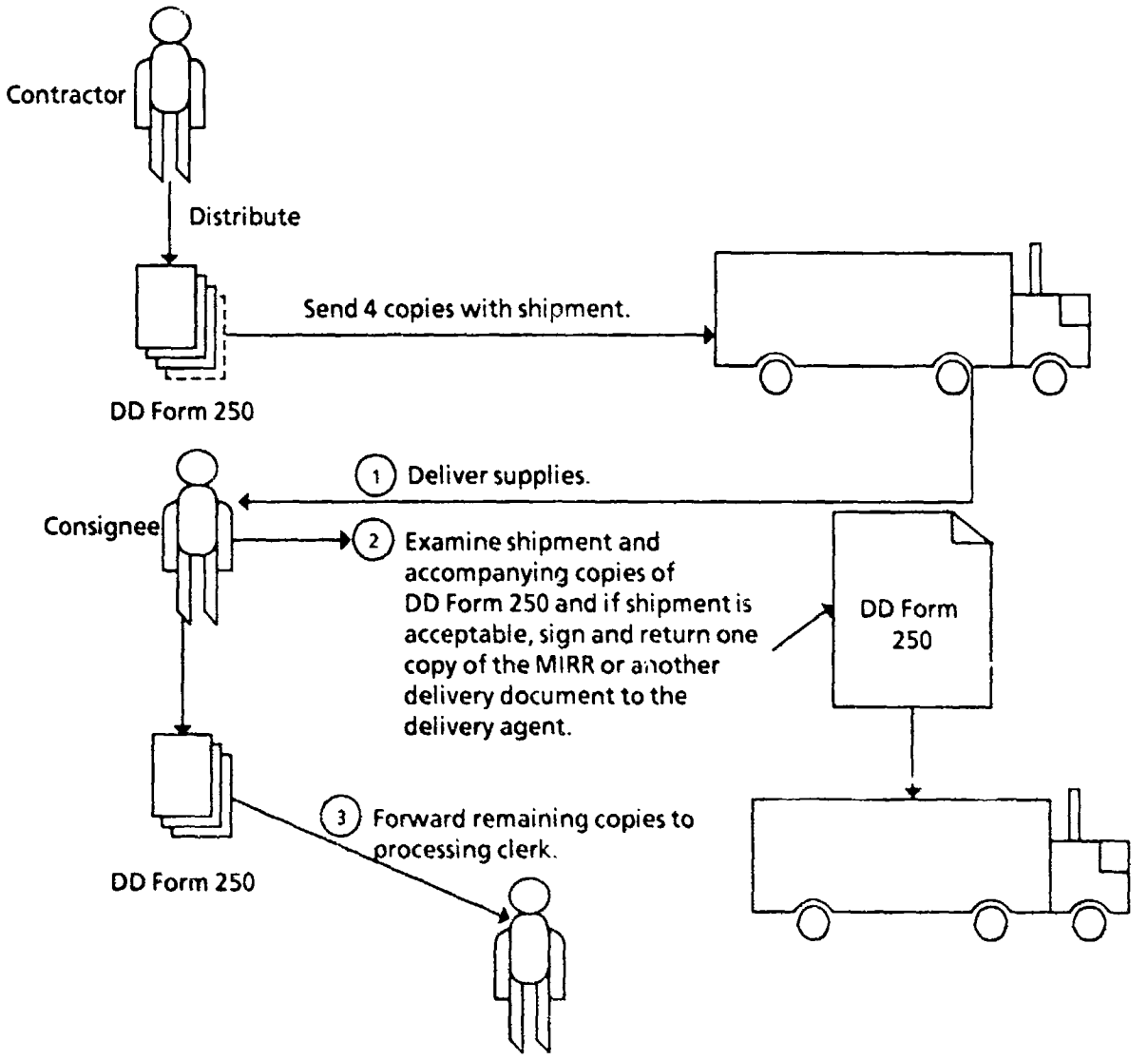


FIG. 3-3. FOUR COPIES ARE SENT WITH THE SHIPMENT

true because automated capabilities vary greatly. From our observations at the few sites we visited, the number of DD Form 250s could be reduced and, with more data base interconnectivity, there could be further reductions.

Contract Administration Office

The recent establishment of the Defense Contract Management Command (DCMC) has unified in one command the former DLA and Service contract administration activities. Although the DCMC has established standards for administering contracts and reporting status, it is our view that it will take time

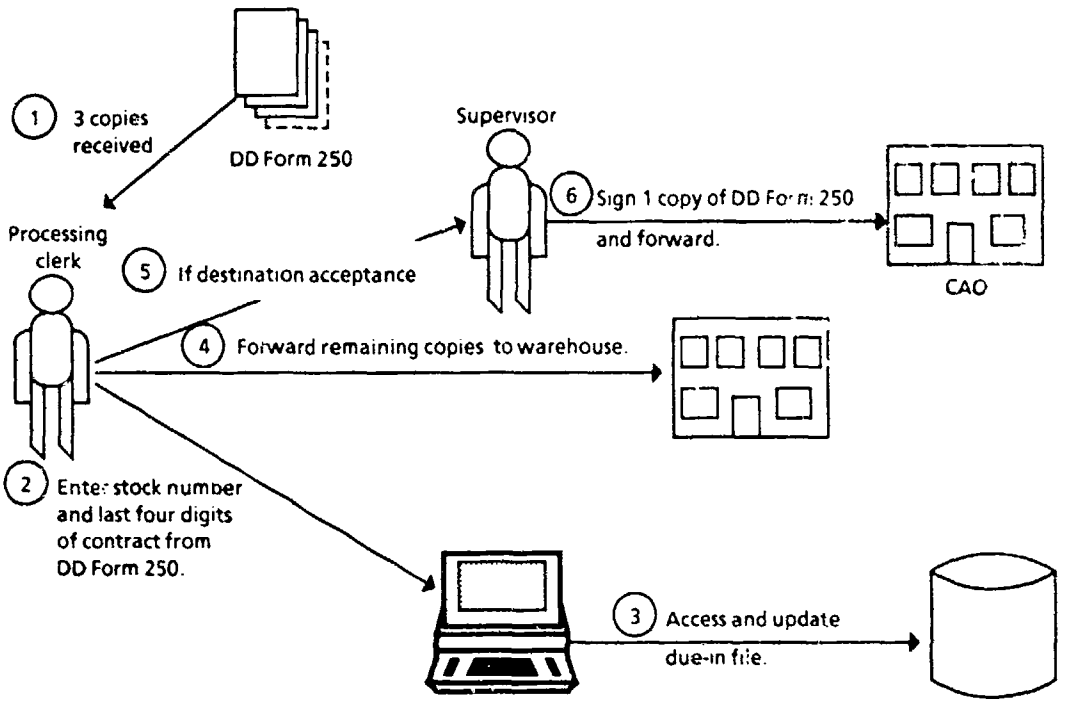


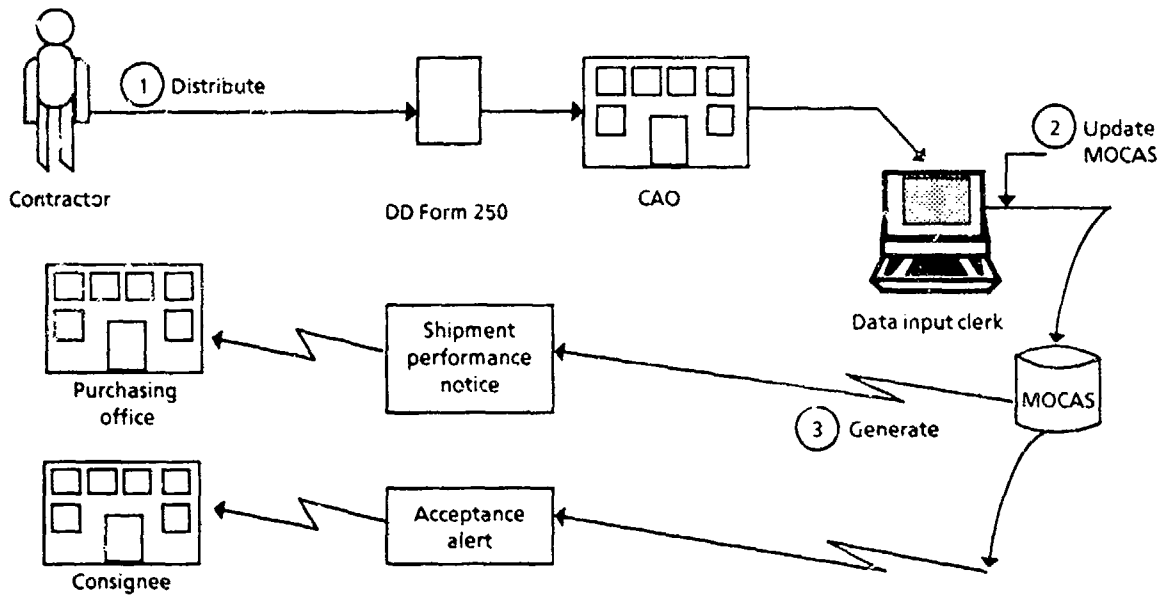
FIG. 3-4. FOUR COPIES ARE RECEIVED WITH THE SHIPMENT

before former Service contract administration activities have equal capabilities and are performing contract administration functions in the same way. Figure 3-5 shows how a typical CAO handles the MIRR.

We found that when a CAO received a MIRR, it was reviewed for accuracy and completeness. If there were any defects in the MIRR that could not be fixed by the CAO, procedures required that the MIRR be returned to the originating contractor.

When an accurate MIRR is manually entered into the contract administration data system, the following processes occur:

- Contract administration records are updated.
- Finance records are updated.
- Quality and other records are updated.
- Shipment notices and acceptance alerts (when applicable) are generated.



Note: MOCAS = Management of Contract Administration System. CAO = contract administration office.

FIG. 3-5. CONTRACT ADMINISTRATION OFFICE MIRR PROCESSING

Payment

Next, we examined the use of the MIRR in the payment process. Present requirements stipulate that three elements match before a contractor can be paid:

- Information abstracted from the contract
- Evidence of acceptance
- Receipt of proper invoice.

Evidence of origin acceptance is satisfied when the CAO enters a DD Form 250 into MOCAS. Invoices (when separate from the DD Form 250) are typically mailed directly from a contractor to a payment office. Figure 3-6 shows the activity generated by sending the DD Form 250 to a payment office. Figure 3-7 shows the same process if the payment office is also a finance center.

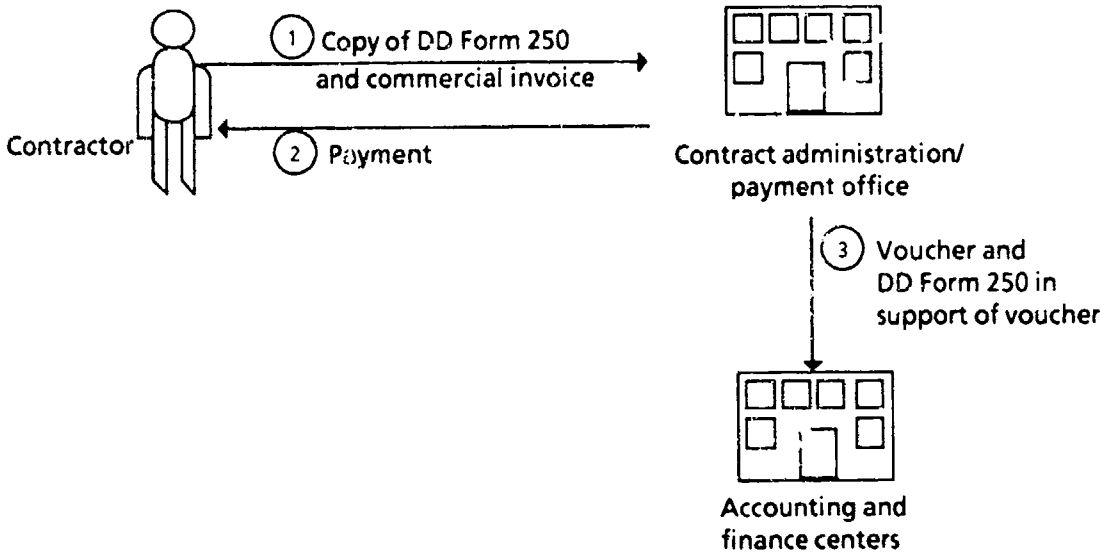


FIG. 3-6. DD FORM 250 USED BY A CONTRACT ADMINISTRATION OFFICE TO SUPPORT A PAYMENT VOUCHER

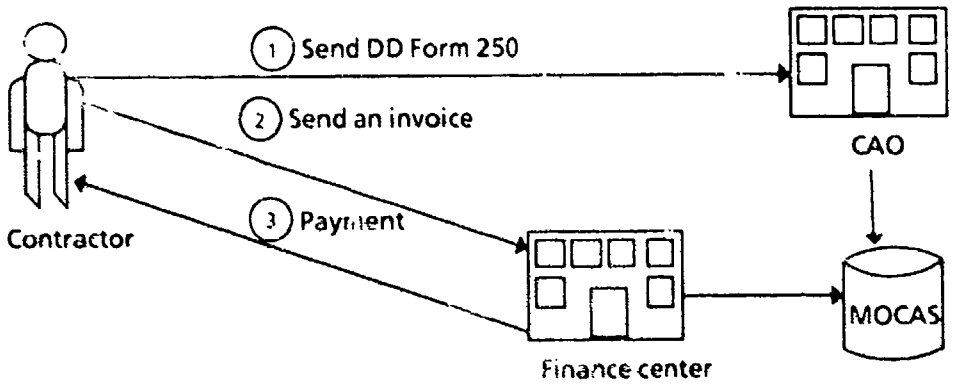


FIG. 3-7. DD FORM 250 SENT TO CONTRACT ADMINISTRATION OFFICE AND AN INVOICE TO A FINANCE CENTER

Purchasing Office

Several purchasing offices were visited. Each performed similar functions but in slightly different ways. Figures 3-8 and 3-9 show two different paper flows.

In the example in Figure 3-8, the DD Form 250 was used for three purposes:

- Updated data base for shipment information if the incoming shipment notice had not been received and accepted

- Filed by procurement
- Management information and reporting.

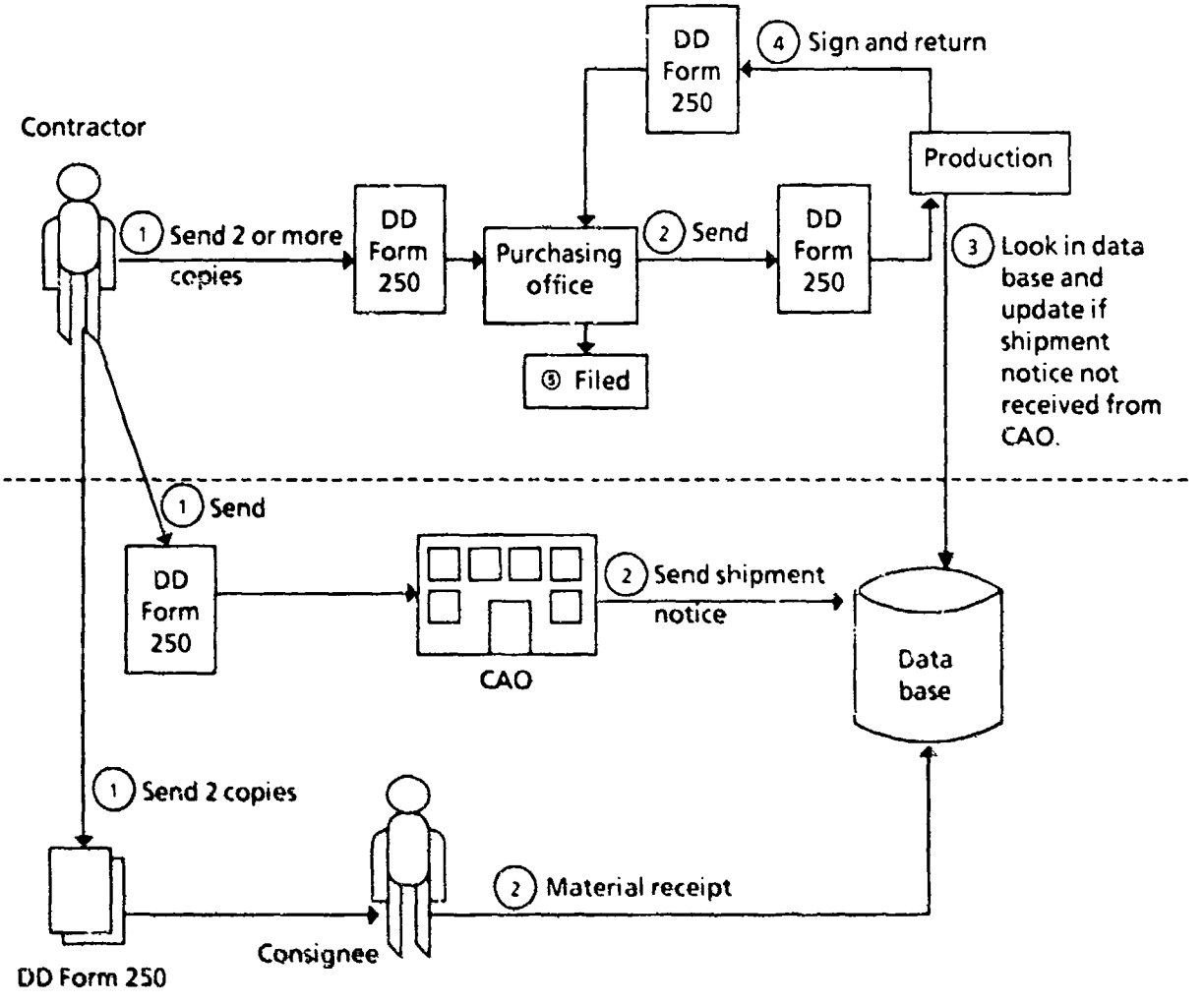


FIG. 3-8. PURCHASING OFFICE CYCLE

Figure 3-8 raises several questions. First, hard copies of MIRRs are filed in the contract file, which is retained after closing the contract and eventually moved to a records-holding area. The DoD must review its filing and storage policy as it converts to an EDI-based MIRR.

Second, we found that at one site visited, an additional copy of the MIRR is sent to production "as a backup" in case the shipment notice was not received, or was rejected, or the purchasing office copy was not forwarded to production. We were told

at several locations that shipment notice rejection rates of up to 50 percent were common.

Figure 3-9 shows what happens to a DD Form 250 at one purchasing office when the contract involved an FMS case. Here too, it seems that there is redundancy in the paper flow. Data base interconnectivity could reduce the need to receive a paper-based MIRR.

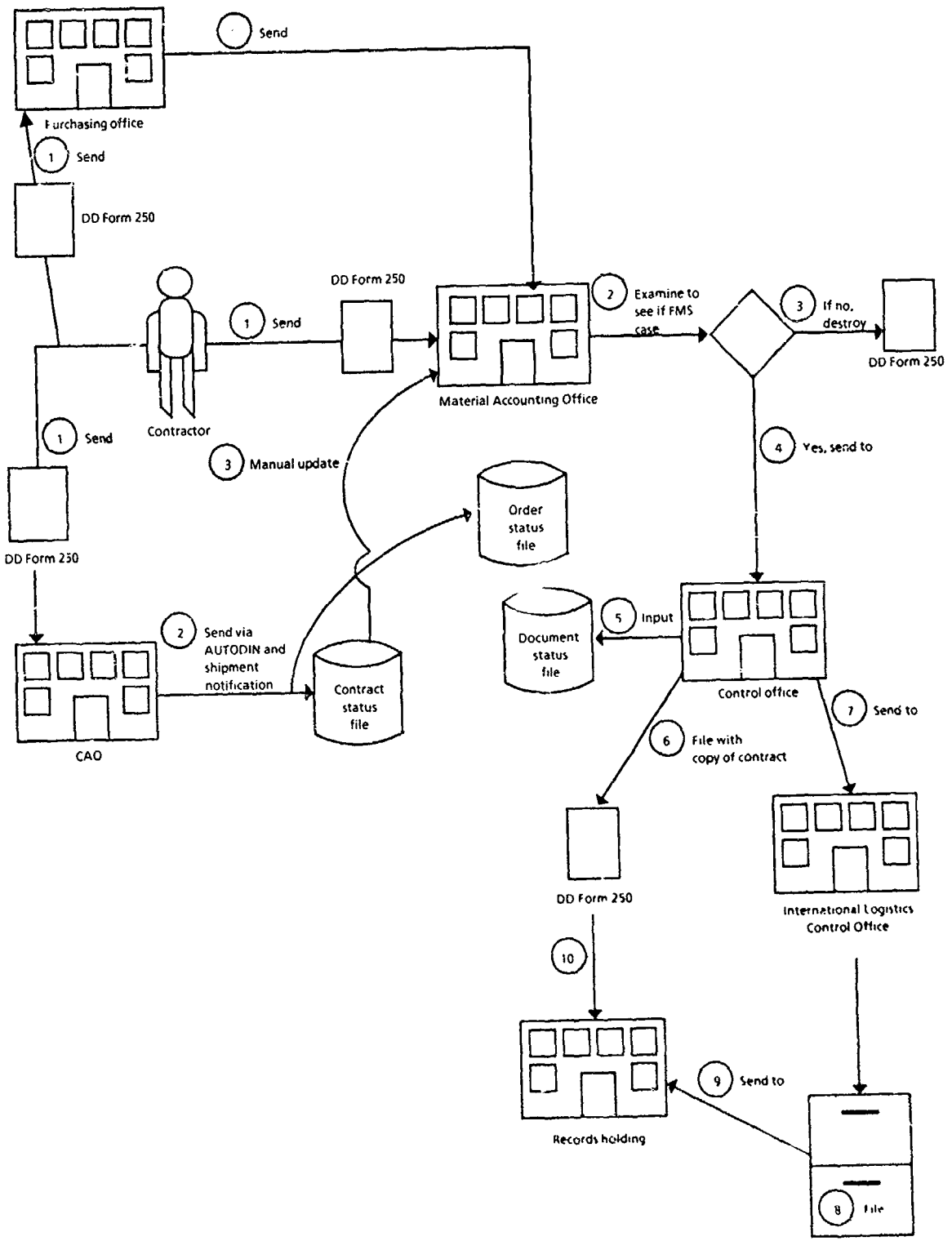
Destination Acceptance

A typical paper flow for destination acceptance shipments is shown in Figure 3-10. Failure to receive a timely notice of receipt remains a perplexing problem for contract administration activities. We believe that the automatic generation of an EDI transaction indicating receipt will improve the current procedure.

Military Installation Procurement

In some cases such as post, camp, or station procurements, the functions of shipping, receiving, inspection, acceptance, and invoicing do not have to use the MIRR. However, the same functions covered by the MIRR must take place using other documents or procedures if an audit trail and accountability are to be maintained. We believe that these functions should also become part of the EDI system, although with less implementation priority than at other locations, where the consolidation of numbers makes better economic sense. An installation receiving process is shown in Figure 3-11.

When delivery is made, the receiving clerk can access a data base or pull a paper copy of the purchase order to match against incoming paperwork and items delivered. A copy of the purchase order (paper copy from file or printed from terminal) is signed. Receiving and procurement files are updated via terminals. Copies of the paper purchase order are archived.



Note: AUTODIN = Automatic Digital Network

FIG. 3-9. PURCHASING OFFICE CYCLE WITH FOREIGN MILITARY SALES

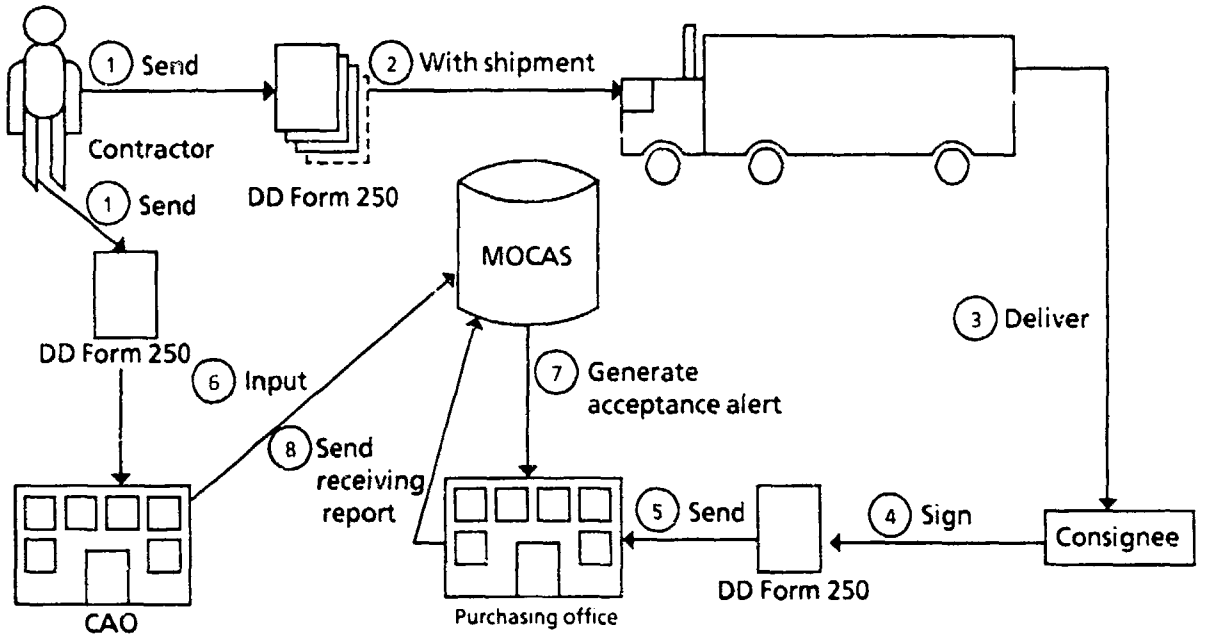


FIG. 3-10. DESTINATION ACCEPTANCE

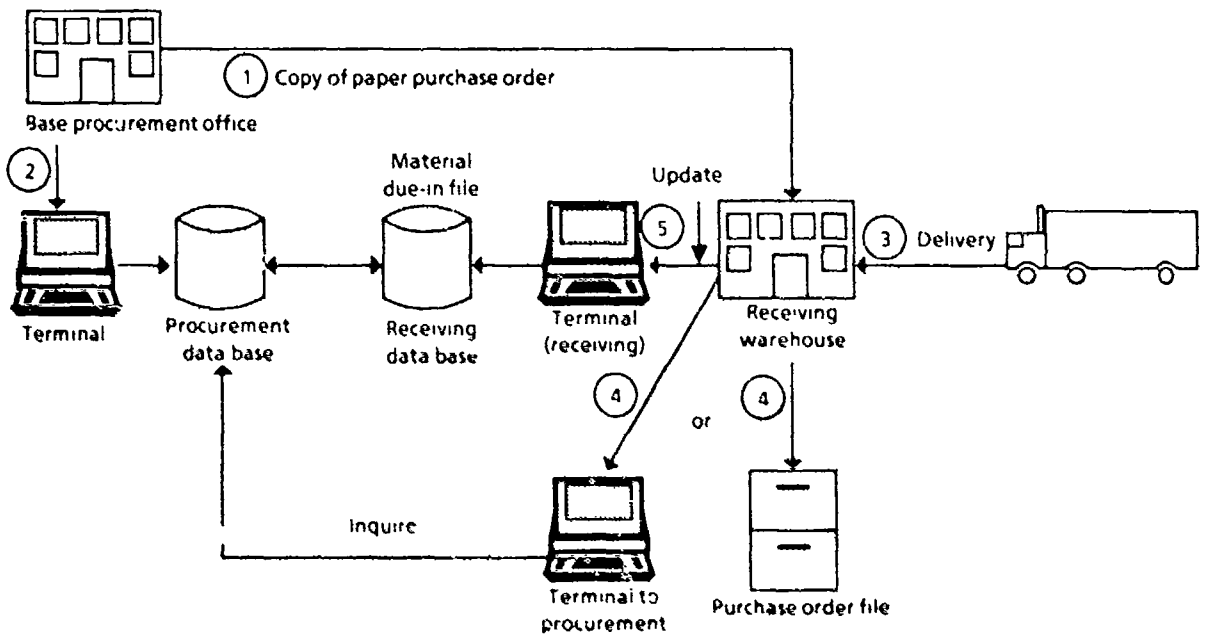


FIG. 3-11. INSTALLATION RECEIVING PROCESS

SUMMARY

In some instances the flow charts show the following:

- Duplicative information is being processed.
- Fewer distribution copies may be sufficient to support the various MIRR uses.
- Data base interconnections could eliminate duplication.

We believe that the foregoing figures illustrate that a detailed study of information flows and data requirements will point the way to many reductions in the paper-based MIRR process. These reductions can be accomplished with relative ease.

CHAPTER 4

CHANGES IN BUSINESS PRACTICES FOR EDI

ESSENTIAL MIRR AND SHIPMENT PERFORMANCE DATA

The DoD must determine the minimum information for each use of the MIRR. When LMI asked users to specify the data elements they needed to perform their jobs, we discovered that not all the information on the MIRR is needed for each MIRR use. We then compared our MIRR data inquiry with the data requirements of the Shipment Performance Notice (SPN) which is the Military Standard Contract Administration Procedures (MILSCAP) electronic version of the MIRR.

Table 4-1 compares MIRR and SPN data elements. We then followed a paper-based MIRR from a contractor through part of the contract administration process to see if MIRR/SPN data was duplicated in the procurement system.

A routing of a paper-based MIRR between a contractor and a DCMC contract administrator might look like Figure 4-1. Much of the information on the MIRR distributed by the contractor is already resident in MOCAS when the copies of the MIRR and/or invoice are received and processed: the contract is usually abstracted into MOCAS very early in the procurement process. The fact that the contract is in an acquisition data base should make it easier to reduce the data elements required in a standard EDI transaction, provided that abstract updates are kept current. Now, let's examine the relationship of the SPN to the MIRR.

MILSCAP SHIPMENT PERFORMANCE NOTICE

Chapter 5 of the MILSCAP Manual states that the SPN "... is the means of providing timely notification of the shipment of material, or the completion of a service.... The SPN obviates the need of several DoD activities editing, keying and verifying data from ... (the MIRR)." .... "The SPN provides information for updating due-in assets, intransit accounting, MILSTRIP shipment status, billing customers on direct delivery and major item control ..."[1]

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[1]DoD 4000.25.5-M, *Military Standard Contract Administration Procedures*, June 1987.

TABLE 4-1

COMPARISON OF MIRR AND SPN DATA ELEMENTS

Data element	Report	
	DD Form 250	SPN
Contractor name or code	X	
Transaction date		X
Contract number	X	X
Order number	X	X
Line item number	X	X
Administered by or code	X	
Shipped from or code	X	
Payment by or code	X	
Invoice number	X	
Invoice amount	X	
Shipment number	X	X
Date shipped	X	X
Bill of lading	X	
Mode of shipment	X	X
Shipment advice	X	X
Acceptance point	X	
Shipped to or code	X	X
Marked for or code	X	X
Stock/part number or MILSTRIP number	X	X
Quantity shipped	X	X
Unit	X	
Date received	X	
Discount terms	X	
PQA	X	
Acceptance	X	
Date of PQA, acceptance, or receipt	X	
Signature, name, office and/or title of authorized Government representative	X	
Transaction status		X
Service description	X	X
Performed at or code		X
Date completed		X
Unit price	X	
Transportation control number	X	
FOB point	X	
Quantity received	X	
Number of shipping containers	X	
Type of shipping containers	X	
Container number	X	
Document identifier code		X

Note: X indicates data element is needed. MILSTRIP = Military Standard Transaction Requisition and Issue Procedures. FOB = Free on board.

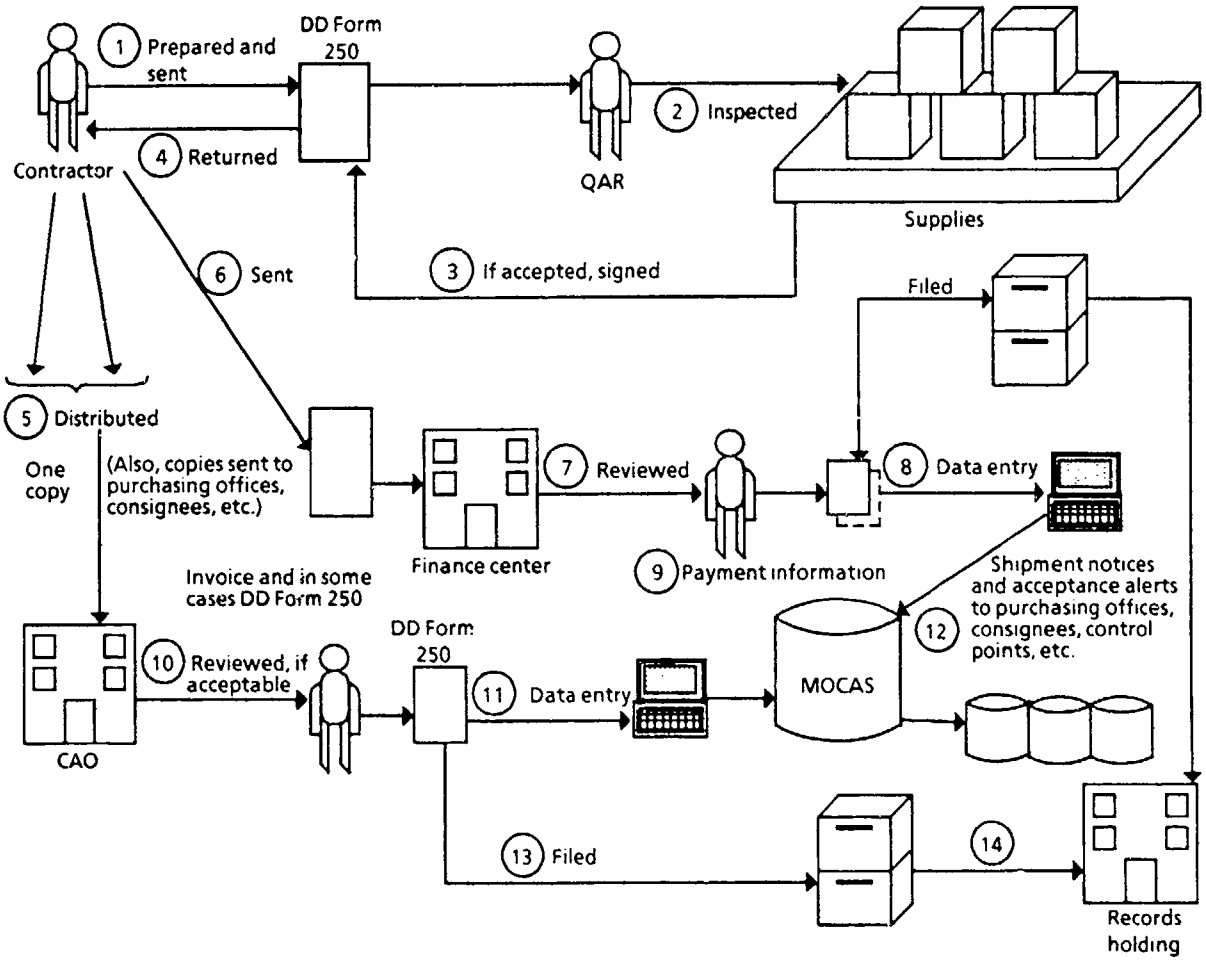


FIG. 4-1. DEFENSE CONTRACT MANAGEMENT COMMAND CONTRACT ADMINISTRATION MIRR FLOW

The SPN is intended to be an electronic replacement for certain uses of the paper-based MIRR. At the present time, the electronic SPN is transmitted to some, but not all, recipients of paper-based MIRRs. Even though the SPN transaction is an electronic version of the shipment notice function of the MIRR, paper-based MIRRs are still distributed to activities – but not necessarily the same offices – that receive the electronic transaction, and vice-versa.

During our interviews, we learned that in some cases, SPNs have been transmitted by the contract administration activity after the "one working day after receipt of the DD Form 250" allowed by policy; in other words, too late to be useful to the recipient. We also learned that there were problems that prevented the SPN transaction from being uploaded to some receiving location data bases. In some

cases, the SPN goes to addressees at a location different than the recipients of the paper-based MIRR.

We were also told that there is no current automated means to advise an office that the SPN it is transmitting has been rejected. Some offices we visited had devised "work arounds" to compensate for missing or defective SPNs. These work arounds require double-checking data files by using a paper copy of the MIRR.

At some locations, we were told that the number of rejected MIRRs had been reduced while at others we were told that the number of rejected MIRRs was "substantial."

The SPN system works well when the contractor submits an accurate paper MIRR on time and it is correctly entered into MOCAS immediately. The SPN system bogs down when the data base is not current or is in error, when contract modifications have not been abstracted, when a defective or late paper MIRR is received, when data entry errors are made, or when the SPN is sent to a station unable to upload the data automatically. Human intervention is always required to overcome these problems. Such intervention is time consuming and the speed of modern supply delivery systems often overtakes the shipment notification process.

For example, we also found differences in Service/Agency MILSCAP capabilities. Service/Agency capabilities to issue and/or receive SPN transactions and destination acceptance reporting transactions are shown in Tables 4-2 and 4-3.

We believe that the DoD should consolidate the SPN transactions with the EDI-based MIRR and expand Service/Agency capabilities for receipt and transmission of all shipping/receiving EDI-based transactions.

MIRR DATA REDUCTION

We believe that some MIRR functions can be accomplished with far less data than now sent on the paper-based form. For example, the former Air Force Contract

Management Division (CMD), Kirkland AFB, New Mexico, developed an electronic system for contractors with these features:

- Contractors could electronically transmit sufficient shipment and invoice information to upload a data base.
- Match data electronically, and if appropriate matches were found, make payment.

TABLE 4-2

CAPABILITIES OF DoD ACTIVITIES TO ISSUE/RECEIVE SPN REPORTS

Activities	SPN	
	Issue	Receive
Army		
AMC MACOMS	X[a,b]	X
Depots		
Test sites		X[c]
Navy		
ICPs		X
Stock points		
CAOs[d]	X	
Air Force		
ALCs		X
Contracting activities		X
CAOs[d]	X[b]	
DLA		
DSCs[e]		X[b]
Depots		
DCASRs[d]	X	

Source: Appendix K, MILSCAP Manual.

Note: AMC = Army Materiel Command; MACOMS = Major Commands; ICPs = Inventory Control Points; ALCs = Air Logistics Centers; DSCs = Defense Supply Centers; DCASRs = Defense Contract Administration Services Regions

[a] To military interdepartmental purchase request initiators

[b] Supply lines

[c] On own local systems

[d] Designations changed with the establishment of the DCMC. Table reflects activity designations from the MILSCAP Manual

[e] The four hardware centers and the Medical Materiel and Clothing and Textile Directorate at Defense Personnel Support Center (DPSC) (through SAMMS) and the Subsistence Directorate at DPSC [through Defense Integrated Subsistence Management Systems (DISMS)]

TABLE 4-3

CAPABILITIES OF DoD ACTIVITIES TO ISSUE/RECEIVE DESTINATION ACCEPTANCE ALERTS/REPORTS

Activities[a]	Acceptance	
	Alerts	Reports
Army		
AMC MACOMS	Issue[b]	Receive
Depots	Issue[b]	Receive
Test sites	Receive[c]	
Navy		
ICPs		
Stock points	Receive	Issue[d]
CAOs		
Air Force		
ALCs		
Contracting activities		
CAOs		
DLA		
DSCs		
Depots	Receive	Issue
DCASRs	Issue	Receive

Source: Appendix K, MILSCAP Manual

[a] Designations changed with the establishment of the DCMC Table reflects activity designations from the MILSCAP Manual

[b] In lieu of acceptance DD Form 250

[c] At White Sands only

[d] Only if an acceptance alert has been received

A signed, paper-based MIRR was still required for backup, to comply with DoD policy and to support other uses of the MIRR. The data elements required in the Air Force system were similar to those shown for the shipment and invoice functions shown in Table 4-4.

We believe that upon careful consideration, the DoD will want a more streamlined information flow – one that cannot exist if the paper-based MIRR is merely converted into one or more EDI transactions which duplicate electronically

TABLE 4-4

POSSIBLE MINIMUM DATA ELEMENTS NEEDED FOR SELECTED MIRR FUNCTIONS COMPARED TO EXISTING DATA REQUIREMENTS

Data element	Report		Selected functions	
	DD Form 250[a]	SPN	Shipment	Invoice
Contractor name or code	X		X	X
Transaction date		X	X	X
Contract number	X	X	X	X
Order number	X	X	X	X
Line item number	X	X	X	X
Administered by or code	X			
Shipped from or code	X			
Payment by or code	X			
Invoice number	X			X
Invoice amount	X			X
Shipment number	X	X	X	X
Date shipped	X	X	X	
Bill of lading	X			
Mode of shipment	X	X	X	
Shipment advice	X	X	X	
Acceptance point	X		X	
Shipped to or code	X	X	X	
Marked for or code	X	X	X	
Stock/part number or MILSTRIP number	X	X	X	
Quantity shipped	X	X	X	X
Unit	X		X	
Date received	X			
Discount terms	X			
PQA	X			
Acceptance	X			
Date of PQA, acceptance, or receipt	X			
Signature, name, office and/or title of authorized Government representative	X			
Transaction status		X		
Service description	X	X		
Performed at or code		X		
Date completed		X		
Unit price	X			
Transportation control number	X			
FOB point	X			
Quantity received	X			
Number of shipping containers	X			
Type of shipping containers	X			
Container number	X			
Document identifier code		X		
Control elements			X	X

Note: X indicates data element is needed

[a] Used as ship notice and invoice

the same data on the MIRR. A comparison between the report and the selected functions columns in Table 4-4 illustrates the point.

Table 4-4 shows that the information needed to perform some MIRR functions may be considerably less than that required for the paper-based MIRR. Figures 4-2 through 4-5, provided by the Air Force, portray savings in days of processing time, that can be achieved by sending reduced data requirements electronically.

In Figures 4-2 and 4-3, shipment notice data processing is compared. The reduction in processing time reported, from 10 days for the manual system to 2 days with the automated system, offers evidence of the savings that could result by moving to an EDI MIRR.

We also compared Air Force receipt of paper-based and automated MIRRs used as invoices in Figures 4-4 and 4-5. The data for this transaction indicate a 7-day savings from receipt of invoice data to date of payment. Of course, any payment system regardless of whether it is paper or EDI-based, will have to comply with the payment timeframes established by applicable laws.

We believe that some of the information presently contained on the paper-based MIRR will not be required for EDI transactions because much of the MIRR data are already available in accessible data bases (e.g., via contract abstracts, establishment of contract due-in files, etc.). Thus, the number of data elements to be transmitted in EDI transaction sets for some uses of the MIRR can be greatly reduced.

We also believe that the data elements used by the Air Force could form the basis of a pilot study and further, that those data elements will easily map to American National Standards Institute (ANSI) data elements although some code additions will be required.

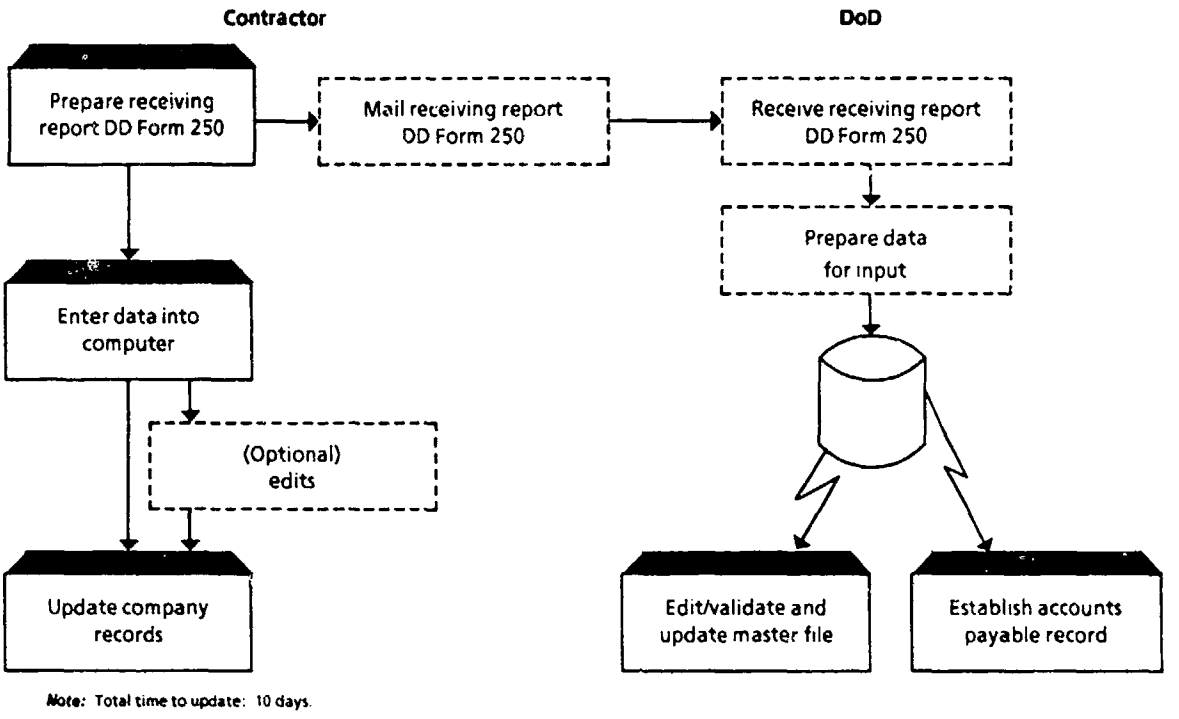


FIG. 4-2. MANUAL DD FORM 250 RECEIVING REPORT PROCESSING FLOW CHART

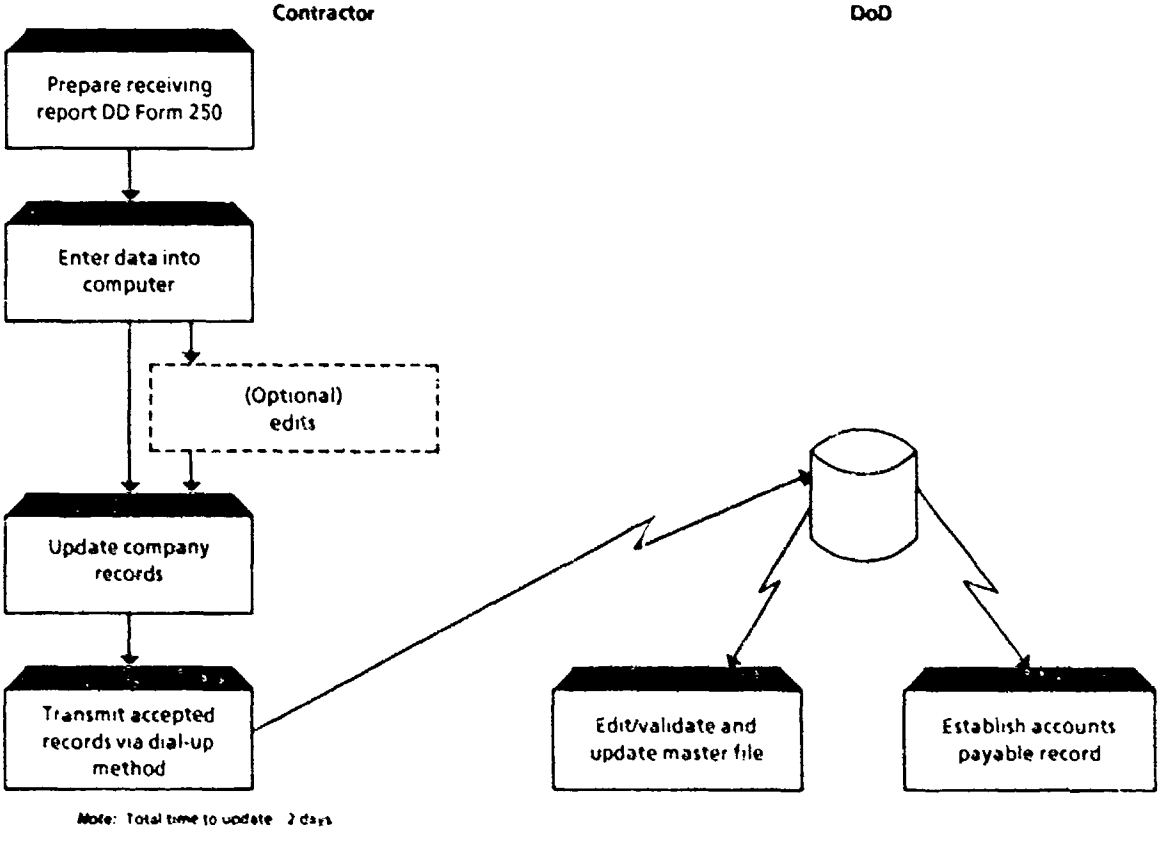
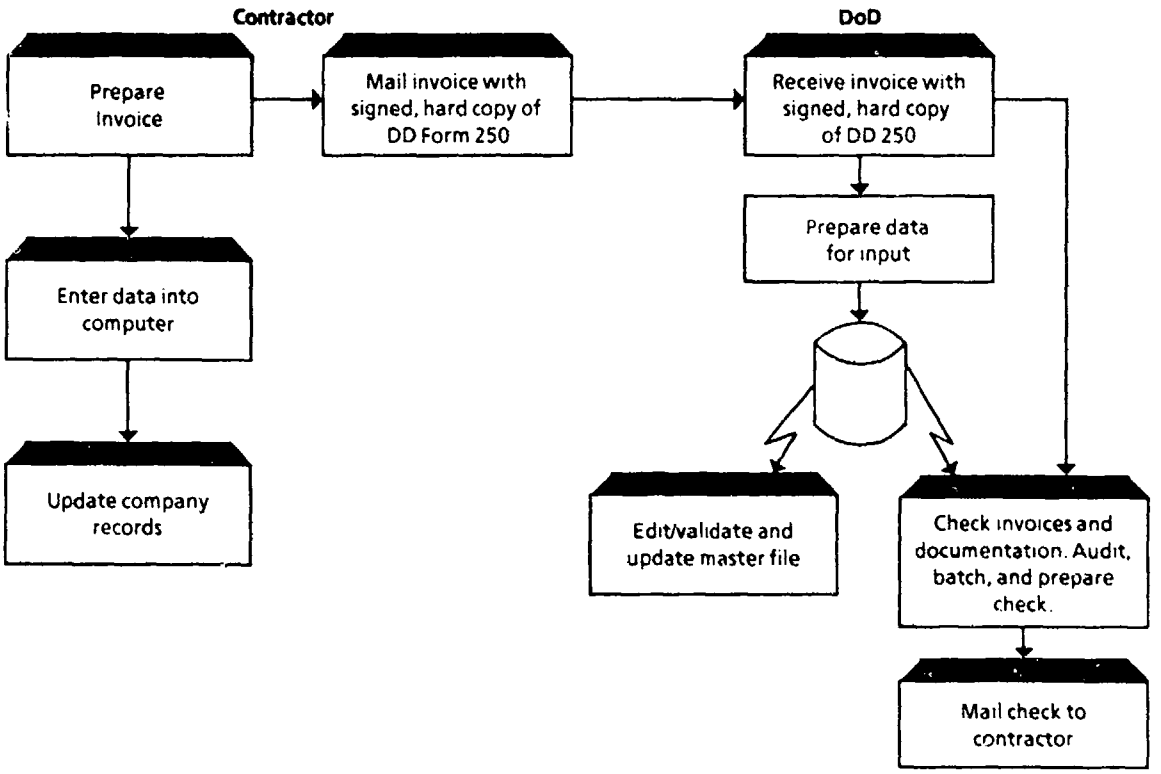
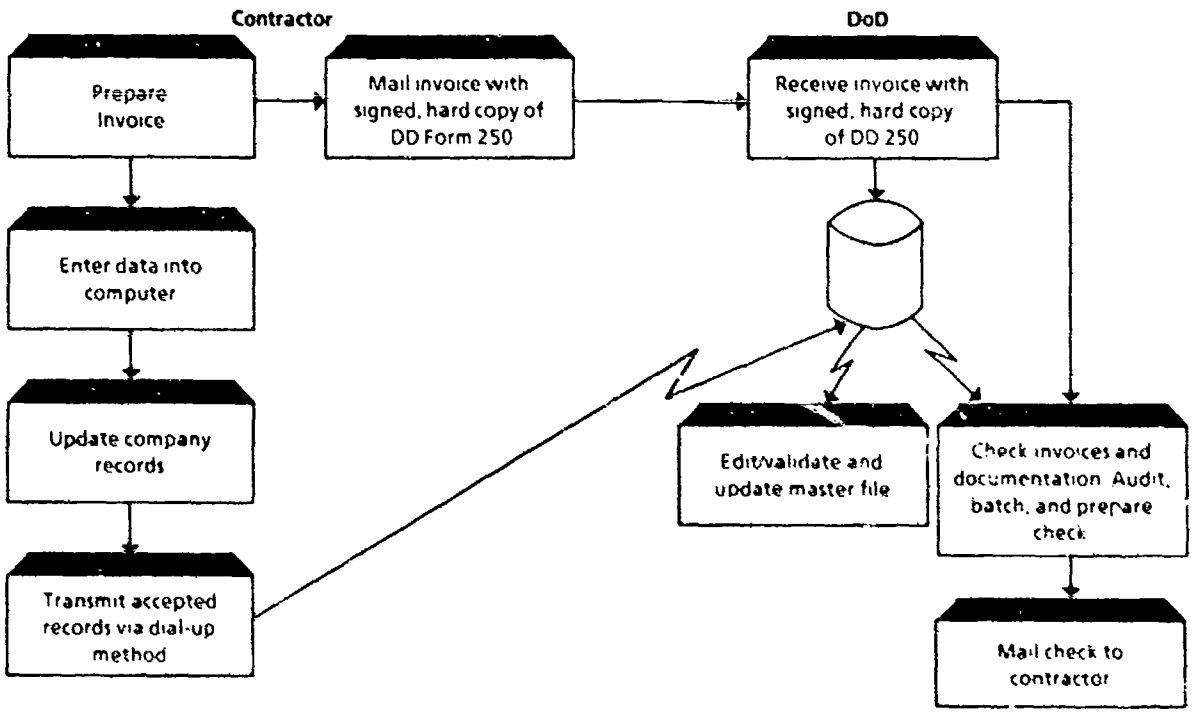


FIG. 4-3. AUTOMATED DD FORM 250 RECEIVING REPORT PROCESSING FLOW CHART



Note: Total preparation time from invoice date to payment 17 days.

FIG. 4-4. MANUAL INVOICE PROCESSING FLOW CHART



Note: Total preparation time from invoice date to payment 10 days.

FIG. 4-5. AUTOMATED INVOICE PROCESSING FLOW CHART

Benefits of MIRR Data Reduction

We believe these benefits will result when the amount of data to satisfy MIRR uses is reduced:

- Reduced communications costs
- Elimination of duplication
- Reduced errors
- Ease of processing
- Speed of processing
- Reduced data storage requirements.

In view of the foregoing, LMI believes that in conjunction with the decision process leading to an EDI-based MIRR, a study should be conducted to:

- Challenge data element requirements for each MIRR use
- Develop a smaller, standard transaction
- Combine the MIRR and SPN into one transaction.

CONTRACTORS AND EDI – ONE FACE TO INDUSTRY

Discussions with several Defense contractors revealed a genuine interest in converting the MIRR to EDI. Some contractors are already participating in pilot projects to transmit MIRR data electronically. LMI believes it will serve the public and private sectors better if DoD consolidated all ongoing EDI MIRR initiatives into one. Contractors we spoke to were already expressing some concerns about the need to control the proliferation of differing EDI MIRR systems.

CHANGING ACQUISITION PRACTICES

We believe that DoD application of EDI technology to the MIRR should follow a study ranging from MIRR data requirements at a minimum and up to acquisition process data elements and information flows at a maximum. Converting the MIRR to EDI should be kept in perspective as being only one small (but important) part of a much larger system of electronic, contracting and electronic commerce. Understanding the data requirements of the entire process now will facilitate DoD conversion efforts later.

For example, we believe that converting to EDI will facilitate DoD changing to a system of evaluated receipt settlements (ERS). This is true because very little information is contained on a contractor invoice that the DoD does not already have in some data base. When a DD Form 250 shipping document has been keyed into a DoD data base, any separate invoice will need to contain an invoice number, date of invoice, and the amount invoiced -- and little else not already available. DoD regulations allow a shipment MIRR to be used as an invoice simply by adding these three data elements and indicating that the document is an original invoice.

We also believe that the DoD should explore the use of a single EDI transaction set for shipment and invoice uses of the MIRR. (The 857 transaction set contained in Appendix D provides an EDI example of this combined use.) By using a combination ship notice and invoice, the DoD will reduce substantially both the paper and the electronic transactions needed for the shipment and invoice uses of the MIRR.

VISION OF THE FUTURE - THE WIDER PERSPECTIVE

A look at the future might reveal an electronic contracting system in which the DoD has established trading partner relationships with a substantial number of its suppliers. In this future environment, all of the following activities and more would take place using standard EDI transactions:

- Bids and offers are solicited; bids, quotes, and price proposals are received; and notifications of award are transmitted.
- DoD fiscal control and management systems are updated.
- Contract files are established and maintained.
- Orders are placed.
- Orders are acknowledged.
- Contractor systems are updated.
- Inspection and acceptance are documented.
- Shipment notices/invoices are transmitted.
- Receipts are documented.

- Discrepancies are reported.
- Funds are transferred.
- Remittance advices are transmitted.

Additional applications, beyond those traditionally associated with the contracting, contract administration, and payment functions would include the following:

- Expanding the capability to receive requirements information electronically from material managers and other "customers" and the ability to use that information in preparing procurement packages
- Reporting status for all phases of the procurement process to all activities needing the information
- Consolidating data and distributing data to application programs
- Storing electronic records.

The EDI MIRR in the Future System of Electronic Contracting

Electronic ordering will enable contractor application programs to perform the following functions:

- Establish production schedules
- Adjust inventory
- Post accounts receivable
- Establish contract administration records
- Develop delivery forecasts
- Develop management reports
- Prepare the MIRR
- Send shipment notices
- Invoice.

While we believe that conversion to an EDI-based MIRR will be useful now, keeping that conversion in perspective and within an overall vision of electronic commerce is necessary to see the role that the MIRR can play and what other work remains to be accomplished.

ADEQUATE DoD COMMUNICATIONS

While conducting interviews for this study, LMI heard concerns about communications systems.

- *System integrity.* As more information is moved electronically, the communications systems carrying that information have to made more reliable.

  An often heard question was..."What do you do when you have an electronic contracting system and the communications system carrying your transactions is down?"

  LMI believes the DoD must have available reliable, communications systems capable of carrying the increased amounts of data. In an electronic environment the DoD cannot afford to be "off the air."

- *Transaction compliant data.* Should ANSI Accredited Standards Committee X12 (ASC X12) compliant transactions be transmitted although they may not conform to existing DoD policy? LMI learned, for example, that unauthorized Service-unique data appeared in some transaction sets when test data were run during the MODELS project. Should nonstandard transactions, or anomalies, be transmitted or should they be stopped before transmission?

  There are at least three solutions to the issue of anomalies:

  - Allow all transactions to be transmitted regardless of their content, as long as they can be translated into and out of a standard EDI format.
  - Put edits on the input and/or output and reject all transactions which do not comply.
  - Put edits on the input and/or output. Transmit transactions which are correct or which contain errors in certain relatively unimportant data fields. Reject all transactions which contain errors in "control" data fields.

  At issue is the need to maintain data integrity versus the flexibility that might be required given the content of the transactions now being transmitted to DoD.

- *SPN.* Are complaints about the SPN system valid? If so, will they impact an EDI-based MIRR?

- *Acknowledgments.* Should transactions be acknowledged, and if so, in what format? Typically, acknowledgment exists today only between transmitting and receiving communications centers. In addition, there is a perception that not all of the transmitted messages get to their ultimate destinations.

This issue should be explored to determine the extent to which it might be a problem in an EDI-based system. If necessary, functional or other types of EDI acknowledgment transactions can be used to alleviate the concern.

A method of acknowledgment already exists in the EDI environment. The issue for the DoD is to determine if such a system is feasible and practical within the DoD context and to determine the type of acknowledgment most appropriate for DoD applications. There are two basic types of acknowledgments:

- Acknowledgment that the transmission has been received.
- Acknowledgment that the transmission has been received, and by expanding the number of returned data elements, that the nature of the transaction is understood and accepted.

AUTHENTICATION OF EDI TRANSACTIONS BY AUTHORIZED GOVERNMENT REPRESENTATIVES

Signatures play an important part in the processing of the paper-based MIRR: They are needed to document inspection, acceptance, and receipt. Transition to EDI technology precludes the traditional way of "signing" paper. For that reason, DoD must decide how it wishes to document in EDI technology the functions of inspection, acceptance, and receiving, and how to maintain adequate audit trails of those activities.

We feel that because the MIRR is an administratively designed form, there is no legal requirement to have a signature to back up an EDI transmission. However, an audit trail must establish the following:

- When acceptance took place
- When goods/services were received
- If the inspection/acceptance and receipt were in good order, or were discrepancies noted
- If accountability can be traced.

We maintain that properly constructed electronic transactions, transmitted over properly constructed networks, employing appropriate levels of authentication and security, will provide all of the safeguards necessary to satisfy these requirements.

TRANSACTION AUTHENTICATION FOR SOURCE INSPECTION/ACCEPTANCE

How might it work in an EDI-based system?

When a contractor has supplies ready for inspection and acceptance, a contractor application program might download a MIRR in EDI format, to a "neutral" data base, which we describe as a data base under Government control. For purposes of this illustration, the data base would be collocated with the DoD quality assurance establishment or at another location under DoD control.

A Government QAR would check the data base or receive data periodically. The entries in the data base would help determine workload so that a QAR in receipt of an EDI MIRR would know that an inspection and an acceptance were required.

Inspection and acceptance would follow the normal procedures. When the lot was determined to be acceptable, the QAR could "sign off" by adding the Block 21 information to the EDI transaction and releasing it or forwarding it for transmission to a distribution list. The additional information required for the forwarding of the EDI MIRR could be as simple as the QAR logging on to a DoD-controlled network by using a discreet identification code, or similar method of authentication. Encryption could also be considered, but it might be more than is needed.

An alternative procedure would have the QAR provide authenticated and/or encrypted data to the contractor who would retain responsibility for making the electronic distribution of the EDI-based MIRR. In this procedure, a QAR would "dial-up" a contractor data base to determine if inspection/acceptance services are required. If so, the QAR would perform the services and return an "authentication" to the contractor data base. Then, the contractor would distribute the transaction.

In the first case, the system is relatively secure because the contractor no longer has access to the electronic MIRR. If the lot is acceptable, the electronic MIRR will be forwarded by the QAR. If the lot is not acceptable, the QAR will not forward the electronic MIRR and convey to the contractor the fact that the lot is unacceptable.

The second example retains contractor responsibility for distribution, which is the current DFARS policy. The contractor would have control of the transaction and some of the data after the QAR had performed inspection and acceptance. A

vulnerability would exist. However, LMI believes that such a system would work for the following reasons:

- An electronic record validating the contractor-provided EDI transaction could be maintained by the DoD.
- In the paper-based MIRR system, the DD Form 250s are signed by the QAR and copies are returned to the contractor for distribution. Instances of "tampering" with the MIRR after return to contractors are rare.
- When there is a large QAR establishment and/or when there is a significant turnover of personnel, it is virtually impossible to recognize the signatures of the QARs who may be inspecting and accepting on behalf of the DoD. In a sense, keeping track is easier if done electronically.

WRITINGS AND SIGNATURES – GENERAL COMMENTS

We do however, recognize the legal implications of acceptance including the risk of loss. It is our opinion that inspection and acceptance within the context of an EDI-based MIRR need not be accomplished in writing; suitable electronic substitutes are valid and can be made binding through contractual instruments and/or trading partner agreements.

In this regard, we believe that the incorporation of clauses defining "writing" and "signature" requirements into contracts or into trading partner agreements can help resolve the issue.

To illustrate, in the monograph *Legal Issues Impacting EDI*,[2] Benjamin Wright offered a clause which would cause the parties to keep a reliable record as a substitute for a "writing." Wright suggested that:

> If a party records the entire contents (including header, trailer and other control information) of an EDI message as it was sent or received by such party, and without modification, such message will be deemed "written" for purposes of the statute of frauds. Each party waives any defense to the enforceability of any contract formed as a result of the transmission of such a recorded message on the ground that such message was not "written."

With regard to "signing" requirements, Mr. Wright suggested this clause:

> Each party will incorporate into each EDI message it sends its respective identification number set forth on Exhibit A hereto (the "ID Number"). If any message containing the ID Number is transmitted using any network access devices or passwords of such party, it will be deemed to have been

[2]Benjamin Wright, *Legal Issues Impacting EDI*, Alexandria, Virginia, TDCC: EDIA, 1988.

> originated, "signed" and "executed" by such party, and the ID Number will be deemed such party's signature. Each party waives any defense to the enforceability of any contract formed as a result of the transmission of such message on the ground that it was not "signed" or "executed" by the party.

We believe that "clauses" similar to the foregoing, when coupled with verifiable means of an authentication, will afford as much security to the EDI-based MIRR as presently afforded to the paper-based version.

We encourage the DoD to develop policy which would recognize electronic signatures and electronically documented inspection and acceptance in lieu of the FAR terminology "... documented on (a) ... form."

We also looked at the issue of signatures to see if there might be an impact on DoD's ability to pay contractors in a "pure" EDI environment. Some current electronic systems we looked at work because they are backed up by signed paper copies. Such a system of paper backup cannot be a long-range solution when the outcome is intended to replace the inefficient practice of passing and storing paper.

Signatures on paper are not the only legal method of conveying a "signature." A symbol, unique to and within the sole custody of an individual, capable of being verified, may be adopted as a means to attest to transaction authenticity. For example, we have read opinions[3] which state that certifications within the context of 31 U.S.C. 3325 can be accomplished electronically without statutory change.

In another opinion[4] (also addressing certifications) it was held that ". . . any symbol adopted as one's signature when affixed with . . . knowledge and content is a binding and legal signature." Further, in a decision dealing with the use of a stamped signature, the Comptroller General noted that ". . . the use of a facsimile device is not prohibited per se . . ." In 33 Comp. Gen. 297 (1954) it was held that such a signature did not appear to afford any less protection.

We believe that the foregoing principles should apply to Government and/or contractor signatures and certifications which may appear as a part of an electronic MIRR system. While the DoD needs to design EDI systems which afford appropriate safeguards against vulnerabilities, we believe that the safeguards should not be

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[3] Acting General Counsel memorandum, 20 September 1984.

[4] Ibid.

burdensome and be capable of economic implementation within existing technologies.

BARRIERS TO EFFECTIVE IMPLEMENTATION OF EDI

Finally, the DoD must be sensitive to the classic barriers to the effective implementation of any EDI-based system.

- Incompatible equipment
- Incompatible data formats
- Incompatible operating schedules
- Incompatible trading partner agreements.

WHAT SHOULD BE CHANGED

In order to make maximum use of the capabilities afforded by converting to EDI, the DoD needs to take the following actions:

- Determine the minimum essential data requirements for each MIRR use.
- Consolidate the MILSCAP SPN and shipment use of the paper-based MIRR.
- Consider combining shipment notices and invoices into one transaction set using the principle of evaluated receipt settlement.
- Consider using ERS.
- Make sure that when paper-based forms are converted to EDI, they will be compatible with the future electronic commerce-based acquisition system.
- Expand data base interconnectivity and communications systems to enable support for increased traffic caused by conversion to EDI-based systems.
- Develop policies for authentication of EDI-based MIRR transactions.

CHAPTER 5

SELECTION OF CANDIDATE TRANSACTION SETS

MAPPING MIRR DATA ELEMENTS[1]

LMI believes that a DoD study will lead to reductions in MIRR data requirements. However, since that study has not yet been conducted, we mapped candidate transaction sets capable of carrying all the data requirements of the existing paper-based MIRR. This was done to prove that all existing data requirements can be mapped. Hopefully, when the DoD reduces data requirements while converting to an EDI-based system, the selected transaction set mappings can be adjusted accordingly.

CANDIDATE TRANSACTIONS

We compared the advantages and disadvantages of designing new DoD transaction sets to process paper-based MIRR data, versus mapping DoD's MIRR data requirements to existing ANSI standards. LMI also considered the possibility that a combination of new transactions and existing standards would better serve the DoD's needs. LMI was influenced by the DoD interest in using existing ANSI standards if they could be feasibly implemented within the Department.

Our preliminary research revealed that ANSI or proposed ANSI standards exist for each of the major categories of MIRR use. In some cases, more than one ANSI transaction was considered as a candidate. Table 5-1 illustrates the candidates we considered.

The scope of our study precluded mapping all possible candidate transaction sets. We did map four transactions and the results are shown in Table 5-2 and the draft mappings are in Appendix C.

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[1]Mapping is the process of converting the data elements from one format (MIRR) into another (ANSI standard).

TABLE 5-1

CANDIDATE TRANSACTION SETS

MIRR use	Possible standards[a]
Shipping	856, 858 } 857
Invoicing	810 }
Receiving	861, 842
Inspecting	863

[a] Standards numbers taken from *ASC X12 Standards Development Workbook*, October 1990.

TABLE 5-2

TRANSACTION SETS SELECTED FOR ROUGH DRAFT MAPPING

MIRR use	Transaction set
Shipping	856, Ship Notice/Manifest
Invoicing	810, Invoice
Receiving	861, Receiving Advice
Inspecting	863, Report of Test Results

MODIFIED STANDARD ANSI TRANSACTIONS

In each case, LMI found that the standard transaction would have to be modified to accommodate DoD data requirements. Primarily, the changes required additions to the code lists found in the ANSI data dictionary and the addition of a few new segments to existing transactions. These segments would be needed to carry data required by current DoD policy. As an example, the DFARS requires price information be included on MIRRs used with certain Navy contracts. As it presently

exists, the ANSI 856 Ship Notice/Manifest Transaction Set does not provide for the convenient carrying of dollar amounts. Dollar amounts could be included in several ways:

- Some change to the standard might be required.
- A mapping could be selected to carry the price information.
- The DoD could change its policy.
- The DoD could choose to design DoD-unique transactions sets.

The changes needed to conform to ANSI standards, as foreseen in our mapping concept, have been annotated for each draft transaction mapping in Appendix C.

OTHER EXISTING TRANSACTION SETS

In our opinion, the 842 Transaction Set, Nonconformance Report, is a candidate to replace the inspection and acceptance and receiving portions of the MIRR when a nonconformance must be reported. When there are nonconformances in inspection, acceptance, and/or receiving, MIRR policy requires additional entries on the form or accompanying explanations. Often the MIRR carries only a reference to the nonconformance, which is explained in more detail in supporting documents and/or discrepancy reports.

As a part of the MODELS project, the DoD is already looking into the possibility of combining several different paper-based discrepancy reports and automating the reporting process. While it would take some changes in DoD policy to combine discrepancy reports with the nonconformance comments that Government representatives now add to the MIRR, or put on accompanying documents, we believe this combination to be a fruitful area of inquiry.

A copy of the 842 Transaction Set is in Appendix D.

If the DoD changes its business practice and moves to a system of evaluated receipt settlement, the shipment notice and invoice uses of the MIRR can be combined. In this case another transaction, such as the 857 Shipment and Billing Notice, may be more appropriate for this combined use of the MIRR than the individual uses of the 810 and 856 transaction sets. (The 857 Transaction Set appears in Appendix D.)

RECOMMENDED TRANSACTIONS

We believe that the MIRR mappings to the 810, 856, 861, and 863 Transaction Sets are as good as any other alternatives. For that reason, they were selected for more detailed analysis and presentation in Appendix C.[2]

PARALLEL INITIATIVES

Task Group Number 1, Maintenance and Enhancements, of the ANSI Government Subcommittee is looking at existing transactions for possible mapping of the MIRR. LMI's involvement with ANSI, and Task Group Number 1 in particular, enabled us to contribute to the effort to the extent that the Task Group's work and the mappings in Appendix C are essentially the same at this point.

PRIVATE SECTOR

We believe that the private sector should and will play a role in the final construct of any standard transactions for the following reasons:

- Contractors will likely be required to prepare the electronic MIRR.
- Standard transactions will affect contractor data bases and application programs.
- The private-sector members of ANSI vote on all proposed new transactions and changes to existing transaction sets.

For these reasons, the DoD should continue to support private-sector initiatives leading to the development of standard transactions. Further, the DoD should consolidate its several internal MIRR initiatives. This is essential to eliminate duplication, proliferation of nonstandard systems, and to ensure that the outcome of a DoD EDI-based MIRR initiative will have popular support and present one face to industry.

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[2]Baselined against Version 2.4 of the ANSI transaction standards with liberal use of the *ASC X12 Standards Development Workbook* dated October 1990.

CHAPTER 6

RECOMMENDED STRATEGY FOR CONVERTING TO A PAPERLESS MIRR

CONVERSION TO EDI

We believe that a p' ased conversion to a paperless, EDI-based MIRR is a feasible and practical course of action for the DoD. In order to convert, DoD will have to take the first steps to set the process in motion.

PHASED IMPLEMENTATION

We also believe that a phased implementation will provide the DoD with the quickest return on its investment. Phasing will enable the DoD to start some conversion now while allowing time to resolve ancillary issues. This would provide the time for ANSI approval of changes needed to bring existing standards in line with DoD data requirements.

Any DoD policy and/or system which requires contractors to maintain both electronic and paper-based systems, could be construed from a private-sector perspective, as adding to the MIRR preparation process. In such an environment, contractors might be reluctant to convert to an EDI-based system unless they can make a profitable business case for the change. The DoD must facilitate the decision process.

As a part of a phased implementation plan, the DoD should take the following actions:

- Establish and test specific transaction constructions and mappings resulting from early stages of a pilot project, using the mappings contained in Appendix C as points of departure
- Determine minimum essential data requirements for all uses of the MIRR
- Determine changes necessary to add DoD data requirements to selected ANSI standards and submit for approval

- Evaluate the combination of shipment notices and invoices into one transaction set
- Determine priorities for application of EDI resources to support MIRR automation.

RECOMMENDATIONS

Pilot Project

Several Defense contractors are now actively exploring a pilot project with the former Air Force CMD (now a part of DLA), to test implementation of EDI-based MIRR transaction sets with focus on shipment notification, progress payments, and invoices. Such a pilot project, using draft mappings and reduced data requirements contained in this report, will allow the testing of the paperless MIRR and will support DoD's efforts to develop a paperless MIRR. Supporting a pilot project will enable the DoD to accomplish the following actions:

- Determine what information needs to be exchanged in the EDI environment. (Capturing these data is essential to the understanding of what business practices can change in the EDI environment.)
- Develop the precise nature of EDI-based MIRR information.
- Determine the minimum essential information that must flow between a contractor, a contract administration activity, a payment office, etc.
- Determine how the information is to flow throughout all of the data networks it must use.
- Validate the content and processing of electronic transmissions.
- Determine if any waivers to existing law, rule, or regulation are required.
- Develop and validate preliminary implementation conventions.
- Examine the use of electronic signatures or suitable substitutes and/or message authentication codes (MACs) to replace the functionality of the signature requirements of the paper-based MIRR.
- Determine if there are any impediments to granting DoD contract administration personnel access to a contractor-managed data base if transactions are to be released from those data bases.
- Assist in the development of new definitions that will be necessary when processing information in an electronic environment. For example, what is the date of an electronic invoice? Is it the date the contractor transmits an

ANSI ASC X12 810 Invoice Transaction Set, or is it the time the transaction arrives at the payment office's electronic mailbox, or some other time?

- Determine if it is better to make transaction distribution using contractor, DoD, and/or commercial distribution systems.
- Determine if an EDI-based system using evaluated receipt settlements will facilitate payments through a single transaction set.
- Obtain a documented baseline system for wider implementation.
- Use a model trading partner agreement for an EDI-based MIRR.
- Make all pilot project materials available to ANSI for approval and the private sector for use.

Additional Issues

The DoD should also take the following actions to ensure the long-term success of an EDI-based MIRR System:

- Reduce MIRR distribution requirements to match advances in automation and changes in on-site practices
- Develop a DoD logistics communications and automation interconnection plan capable of supporting conversion to EDI
- Develop protocols and implementation conventions for using specific EDI transactions
- Determine if the MILSCAP shipment performance notice can be combined with an EDI MIRR and, if so, determine how rejections will affect the EDI system
- Review and correct any impediments to automated processing of shipment notices and invoices
- Expand the number of activities capable of receiving shipment notices and develop a system of reject notification
- Explore technologies to eliminate all remaining copies of the paper-based MIRR
- Establish policies for using electronic transactions rather than paper to document contract files
- Determine adequate authentication safeguards and publish policy
- Consolidate ongoing MIRR initiatives and standardize on one methodology

- Determine how to distribute the EDI-based MIRR to other than "standard" recipients
- Place the MIRR EDI effort within the context of an overall system of electronic contracting
- Combine the SPN transactions in MILSCAP with EDI-based transactions in MIRR
- Develop additions and clarifications to DFARS to accommodate a paperless MIRR
- Relate ongoing EDI initiatives to the Corporate Information Management (CIM) decision process
- Determine if an EDI-based MIRR will be mandated in the long term or remain a permissible method between willing trading partners
- Distribute and coordinate within DoD, the draft MIRR transaction sets
- Examine the impact of EDI-based MIRR on small business
- Look at the possibility of proliferating DoD EDI MIRR throughout the Federal Government
- Develop a DoD EDI implementation plan for the MIRR
- Determine if current communications reliability can support EDI systems not backed up with paper
- Develop edit and fault tolerance polices for EDI transactions
- Develop a communications interconnection plan addressing such issues as DoD networks, commercial value-added networks, etc.
- Determine if EDI transactions should be functionally acknowledged
- Develop a standard model for a trading partner agreement for use with an EDI-based MIRR.

ELIMINATION OF PAPER-BASED MIRR

We can see no technical barriers to the eventual elimination of the paper-based MIRR. However, it is clear that the DoD will not be able to eliminate all uses or distribution copies of the paper form immediately. We believe the most immediate reduction can be made in the numbers of copies of the MIRR that are sent to any given destination. Computer technology, the growth of data bases, data distribution technology, and the proliferation of that technology and its accompanying hardware

throughout the DoD suggest that the mandated distribution lists for the MIRR should be reviewed to reduce the distribution copies required.

The paper-based MIRR will still have application even after its uses are available in EDI transaction sets because of the following reasons:

- DoD activities will acquire EDI capabilities at different times.
- Defense contractors will acquire EDI capabilities at different times.
- Some current applications of the paper-based MIRR are more readily accommodated using paper. These include the following copies:
  - Those included with the shipment until policy/technology such as bar-coding eliminates the four paper copies of the MIRR now sent with each shipment
  - Those used as backup for other paper, such as shipping documents.

DoD policy will have to address these other issues in time.

We believe that the paper-based MIRR will disappear eventually. Substantial immediate reductions in paper generation, processing, and storage should give the DoD sufficient incentive to start now. Regardless of whether 100 percent of the paper will be eliminated, if the right priorities for conversion are determined, what little paper remains will, in our opinion, be inconsequential.

GLOSSARY

ALC	=	Air Logistics Center
AMC	=	Army Materiel Command
ANSI	=	American National Standards Institute
ASC X12	=	Accredited Standards Committee (X12)
AUTODIN	=	Automatic Digital Network
CAO	=	contract administration office
CCSS	=	Commodity Command Standard System
CIM	=	Corporate Information Management
CMD	=	Contract Management Division
DCASR	=	Defense Contract Administration Services Region
DCMC	=	Defense Contract Management Command
DFARS	=	Defense Federal Acquisition Regulation Supplement
DISMS	=	Defense Integrated Subsistence Management System
DLA	=	Defense Logistics Agency
DoD	=	Department of Defense
DPSC	=	Defense Personnel Support Center
DSC	=	Defense Supply Center
EDI	=	electronic data interchange
ERS	=	evaluated receipt settlement
FAR	=	Federal Acquisition Regulation
FMS	=	Foreign Military Sales
FOB	=	Free on Board
ICPs	=	Inventory Control Points

GLOSSARY (Continued)

LMI	=	Logistics Management Institute
MACOMs	=	major commands
MACs	=	message authentication codes
MILSCAP	=	Military Standard Contract Administration Procedures
MILSTRIP	=	Military Standard Requisitioning and Issue Procedures
MIRR	=	Material Inspection and Receiving Report (DD Form 250 series)
MODELS	=	Modernization of the Defense Logistics Standard Systems
MOCAS	=	Management of Contract Administration System
OSD	=	Office of the Secretary of Defense
PCO	=	purchasing contracting officer
PQA	=	procurement quality assurance
QAR	=	quality assurance representative
SAMMS	=	Standard Automated Materiel Management System
SPEDE	=	SAMMS Procurement by Electronic Data Exchange
SPN	=	shipment performance notice

APPENDIX A

DD FORM 250, MATERIAL INSPECTION AND RECEIVING REPORT

MATERIAL INSPECTION AND RECEIVING REPORT

Form Approved
OMB No. 0704-0248
Expires Dec 31, 1990

1. INSTRUMENT IDEN. (CONTRACT)	(ORDER) NO.	6. INVOICE	7. PAGE	OF	8. ACCEPTANCE POINT

2. SHIPMENT NO.	3. DATE SHIPPED	4. B/L TCN	5. DISCOUNT TERMS

9. PRIME CONTRACTOR CODE		10. ADMINISTERED BY CODE	
11. SHIPPED FROM (If other than 9) CODE	FOB.	12. PAYMENT WILL BE MADE BY CODE	
13. SHIPPED TO CODE		14. MARKED FOR CODE	

15. ITEM NO.	16. STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number)	17. QUANTITY SHIP / REC'D *	18. UNIT	19. UNIT PRICE	20. AMOUNT

21. PROCUREMENT QUALITY ASSURANCE		22. RECEIVER'S USE
A. ORIGIN ☐ PQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.	B. DESTINATION ☐ PQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.	Quantities shown in column 17 were received in apparent good condition except as noted
DATE / SIGNATURE OF AUTH GOVT REP	DATE / SIGNATURE OF AUTH GOVT REP	DATE RECEIVED / SIGNATURE OF AUTH GOVT REP
TYPED NAME AND OFFICE	TYPED NAME AND TITLE	TYPED NAME AND OFFICE
		* If quantity received by the Government is the same as quantity shipped, indicate by (✓) mark. If different, enter actual quantity received below quantity shipped and encircle

23. CONTRACTOR USE ONLY

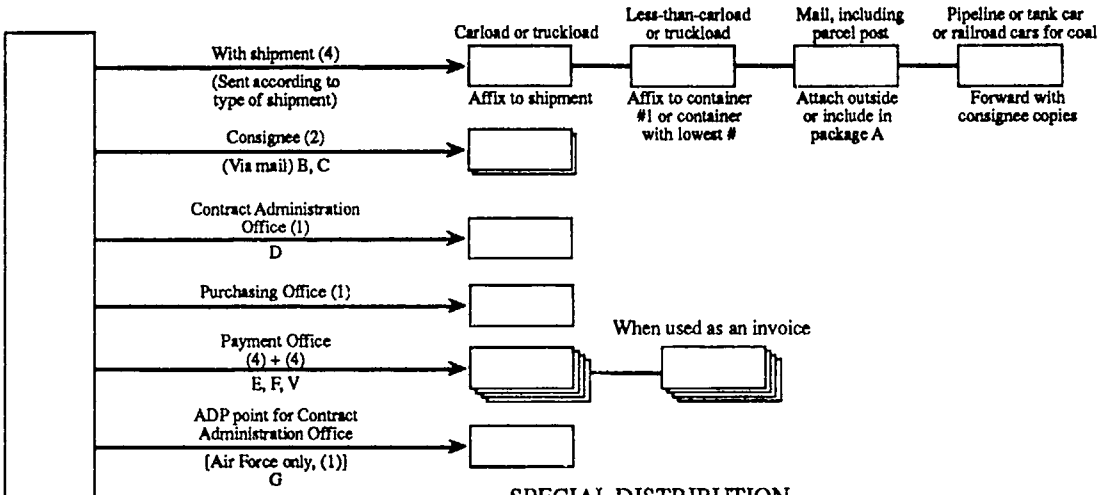
DD Form 250, JAN 90 — Previous editions are obsolete. — 311051

APPENDIX B

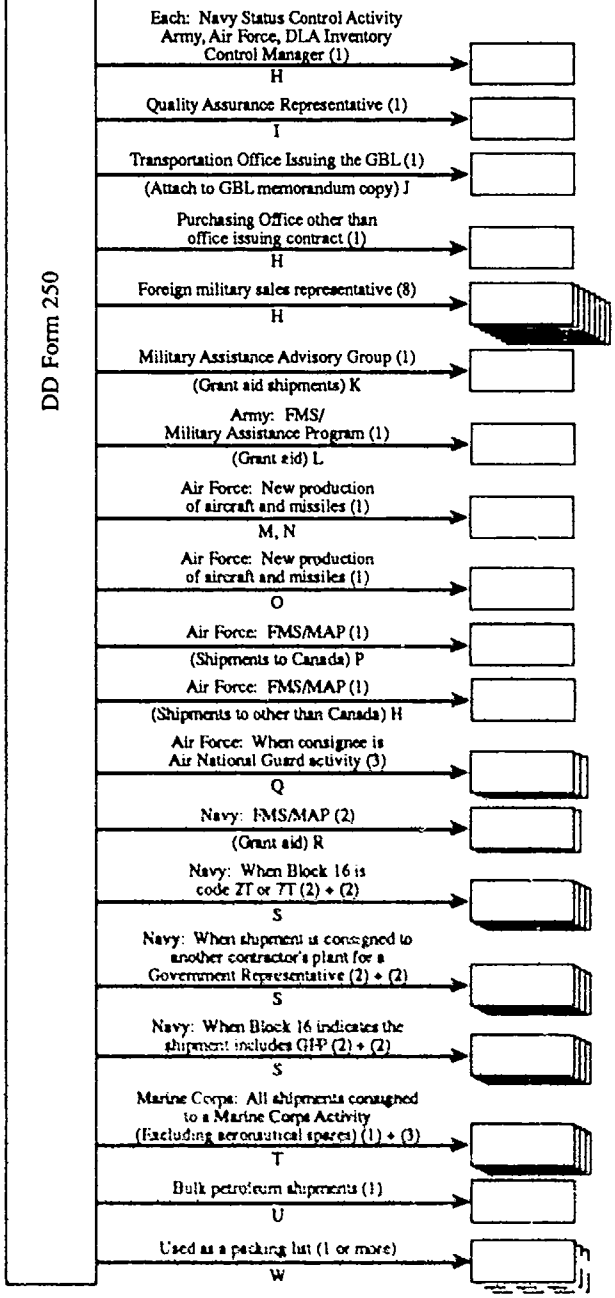
DISTRIBUTION TABLES - DD FORM 250
MATERIAL INSPECTION AND RECEIVING REPORT

DD Form 250 Material Inspection and Receiving Report

STANDARD DISTRIBUTION



SPECIAL DISTRIBUTION



NOTES

A. Include a copy in each additional package of a multipackage shipment.

B. Copies must be priced for Navy procurements.

C. Consignee copies not required for Grant Aid/Foreign Military Sales (FMS).

D. Forward direct to the addressee in Block 10 except forward through the Authorized Government Representative when acceptance is at origin and a Certificate of Conformance or Alternate Release Procedure is involved.

E. Forward direct to the addressee in Block 12 except do not make distribution when contract administration and payment are both within the Defense Contract Administration System (DCAS); when Block 12 is the Air Force Contract Management Division (AFCMD), attach only one copy to the required number of copies of the contractor's invoice; when acceptance is at destination and a Navy finance office will make payment, forward to destination; forward through the Authorized Government Representative when acceptance is at origin and a Certificate of Conformance or Alternate Release Procedure is involved.

F. Payment by DCASRs is based on the source acceptance copy of the DD Form 250 forwarded to the contract administration office except where distribution is made to DCASR payment offices.

G. When an Air Force Plant Representative Office (AFPRO) administers the contract, or HQ AFCMD is the payment office, send one copy to HQ AFCMD. If submission of delivery data is by mechanical means, distribution of this hard copy need not be made to HQ AFCMD.

H. Send to each address specified in the contract.

I. Send to address specified by the assigned Quality Assurance Representative.

J. Send to the Contract Administration Office unless otherwise specified in the contract.

K. Send to the U.S. Military Advisory Group, Military Attache, Mission, or other designated agency address as specified in the contract.

L. Send to the Commander, U.S. Army Security Affairs Command, New Cumberland Army Depot, PA. (Different attention lines are required depending upon the destination country).

M. New production of aircraft or missiles, class 1410 missiles, 1510 aircraft, 1520 aircraft, 1540 gliders, and 1550 target drones.

N. Send to Air Force Logistics Command (AFLC), Wright-Patterson AFB, OH.

O. When the items described in note "M" are delivered to aircraft modification centers, send a copy to the Air Force Plant Representative Office.

P. Send to National Defense Headquarters, Ottawa, Ontario, Canada.

Q. Send to consignee address in Block 13, ATTN: Property Officer.

R. Send to U.S. Navy International Logistics Office (NAVILCO), Philadelphia, PA.

S. Send two copies to ASO, Philadelphia, PA and send two additional copies to SPCC, Mechanicsburg, PA.

T. Send one copy to the Commandant of the Marine Corps, HQ USAMC, Washington, DC, and send three additional copies to the CG, Marine Corps Logistics Base, Albany, GA.

U. Send to cognizant Defense Fuel Region. (Table of cognizant regions is listed in DFARS.)

V. Copies of the MIRR used as an invoice are in addition to the 4 required by the standard distribution.

W. When used as a packing list, copies are in addition to the copies of the MIRR required for standard distribution.

Notes: 1. Based on DFARS Appendix I
2. Names used and relationships described are baselined prior to establishment of the define contract management command.

APPENDIX C

DRAFT MAPPINGS OF THE MIRR TO STANDARD TRANSACTION SETS

810 Invoice

FUNCTIONAL GROUP ID = IN

This standard provides the format and establishes the data contents of an invoice transaction set. The invoice transaction set provides for customary and established business and industry practice relative to the billing for goods and services provided.

Table 1

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	ST	Transaction Set Header	M	1			
020	BIG	Beginning Segment for Invoice	M	1			
030	NTE	Note/Special Instruction	F	100			
040	CUR	Currency	O	1			
050	REF	Reference Numbers	O	12			
060	PER	Administrative Communications Contact	O	3			
070	N1	Name	O	1	N1/200		
080	N2	Additional Name Information	O	2			
090	N3	Address Information	O	2			
100	N4	Geographic Location	O	1			
110	REF	Reference Numbers	O	12			
120	PER	Administrative Communications Contact	O	3			
130	ITD	Terms of Sale/Deferred Terms of Sale	O	5			
140	DTM	Date/Time Reference	O	10			
150	FOB	F.O.B. Related Instructions	O	1			
160	PID	Product/Item Description	O	200			
170	MEA	Measurements	O	40			
180	PWK	Paperwork	O	25			
190	PKG	Marking, Packaging, Loading	O	25			
200	L7	Tariff Reference	O	1			

Table 2

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	IT1	Baseline Item Data (Invoice)	O	1	IT1/200000		
020	CUR	Currency	O	1			
030	IT3	Additional Item Data	O	5			
040	TXI	Tax Information	O	10			
050	CTP	Pricing Information	O	25			
059	MEA	Measurements	O	40		375290	
060	PID	Product/Item Description	O	1	PID/1000	375290	
070	MEA	Measurements	O	10		375290	
080	PWK	Paperwork	O	25			
090	PKG	Marking, Packaging, Loading	O	25			
100	PO4	Item Physical Details	O	1			
110	ITD	Terms of Sale/Deferred Terms of Sale	O	2			
120	REF	Reference Numbers	O	>1			
130	PER	Administrative Communications Contact	O	5			
140	SDQ	Destination Quantity	O	500			
150	DTM	Date/Time Reference	O	10			
160	CAD	Carrier Detail	O	>1			

170	L7	Tariff Reference	O	>1	
180	ITA	Allowance, Charge or Service	O	1	ITA/10
190	TXI	Tax Information	O	10	
200	SLN	Subline Item Detail	O	1	SLN/1000
210	REF	Reference Numbers	O	>1	
220	PID	Product/Item Description	O	1000	
230	ITA	Allowance, Charge or Service	O	10	
240	N1	Name	O	1	N1/200
250	N2	Additional Name Information	O	2	
260	N3	Address Information	O	2	
270	N4	Geographic Location	O	1	
280	REF	Reference Numbers	O	12	
290	PER	Administrative Communications Contact	O	3	

Table 3

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	TDS	Total Monetary Value Summary	M	1			
020	TXI	Tax Information	O	10			
030	CAD	Carrier Detail	O	1			
040	ITA	Allowance, Charge or Service	O	1	ITA/10		
050	TXI	Tax Information	O	10			
060	ISS	Invoice Shipment Summary	O	5			
070	CTT	Transaction Totals	M	1			Note 1
080	SE	Transaction Set Trailer	M	1			

Note 1: Number of line items (CTT01) is the accumulation of the number of IT1 segments. If used, hash total (CTT02) is the sum of the value of quantities invoiced (IT102) for each IT1 segment.

	SEGMENT:	ST – TRANSACTION SET HEADER
	LEVEL:	Header
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the start of a transaction set and to assign a control number.

COMMENTS: A. The transaction set identifier (ST01) is intended for use by the translation routines of the interchange partners to select the appropriate transaction set definition.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	ST01	143	TRANSACTION SET ID CODE Code uniquely identifying a transaction set. 810 Invoice	M ID 3/3
MANDATORY	ST02	329	TRANSACTION SET CONTROL NUMBER Identifying control number assigned by the originator for a transaction set.	M AN 4/9

	SEGMENT:	BIG – BEGINNING SEGMENT FOR INVOICE
	LEVEL:	Header
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the beginning of an invoice transaction set and to transmit identifying numbers and dates.
	COMMENTS:	A. BIG07 is used only to further define the type of invoice when needed.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	BIG01	245	INVOICE DATE Invoice issue date.	M DT 6/6
MANDATORY	BIG02	76	INVOICE NUMBER Identifying number assigned by issuer.	M AN 1/22
NOT USED	BIG03	323	PURCHASE ORDER DATE	O DT 6/6
OPTIONAL NOTE: A. This element carries the Government contract number. Contractors when dealing with their vendors will use code "CT" with the "REF" segment.	BIG04	324	PURCHASE ORDER NUMBER Identifying number for purchase order assigned by the orderer/purchaser	O AN 1/22
OPTIONAL NOTE: A. This element carries the call/order number	BIG05	328	RELEASE NUMBER Number identifying a release against a purchase order previously placed by the parties involved in the transaction	O AN 1/30
OPTIONAL NOTE: A. This element carries the modification number	BIG06	327	CHANGE ORDER SEQUENCE NUMBER Number assigned by the orderer identifying a specific change or revision to a previously transmitted transaction set	O AN 1/8

OPTIONAL	BIG07	640	TRANSACTION TYPE CODE Code specifying the type of transaction.	O	ID	2/2

CI Consolidated invoice
CO Corrected
CR Credit Memo
DR Debit Memo
DU Duplicate
FB Final Bill
PB Partial Bill
MC Material Credit Invoice
PR Product (or Service)
RE Rebill
– Progress Bill[1,2]
– Cost Voucher
– Standard Invoice

[1]The " – " (dash) symbol is used when the existing Standard Data Element Dictionary Code List does not contain a code needed by DoD. In these cases, if the DoD desires to use the code, a data maintenance request asking for the addition of the new code, will have to be submitted to ANSI, or another mapping method will have to be used

[2]Data Maintenance Requests were not prepared as a part of this study

	SEGMENT:	NTE - NOTE/SPECIAL INSTRUCTION
	LEVEL:	Header
Optional	REQ.DES.:	Floating
100	MAX USE:	100
	LOOP:	0
	PURPOSE:	To transmit information in a free-form format, if necessary, for comment or special instruction.

COMMENTS: A. The NTE segment permits free-form information/data which, under ANSI X12 standard implementations, is not machine processable. The use of the "NTE" segment should therefore be avoided, if at all possible, in an automated environment.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL	NTE01	363	NOTE REFERENCE CODE Code identifying the functional area or purpose for which the note applies. INV Invoice Instruction	O ID 3/3
OPTIONAL	NTE02	3	FREE-FORM MESSAGE Free-form text.	M AN 1/60

	SEGMENT:	CUR – CURRENCY
	LEVEL:	Header
Optional	REQ.DES.:	Optional
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To specify the currency used in a transaction.
	SYNTAX NOTES:	See ANSI standard for notes.
	COMMENTS:	See ANSI standard for notes.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	CUR01	98	ENTITY IDENTIFICATION CODE Code identifying an organizational entity or physical location. PE Payee PR Payer	M ID 2/2
MANDATORY	CUR02	100	CURRENCY CODE Code (Standard ISO) for country in whose currency the charges are specified	M ID 3/3
OPTIONAL	CUR03	280	EXCHANGE RATE Value to be used as a multiplier conversion factor to convert monetary value from one currency to another.	O R 4/6
OPTIONAL	CUR04	98	ENTITY IDENTIFICATION CODE Code identifying an organizational entity or physical location PE Payee PR Payer	O ID 2/2
OPTIONAL	CUR05	100	CURRENCY CODE (See above)	M ID 3/3
OPTIONAL NOTE: A Not used by DoD	CUR06	669	CURRENCY/MARKET EXCHANGE CODE	O ID 3/3

CONDITIONAL	CUR07	374	DATE/TIME QUALIFIER Code specifying type of date or time, or both date and time. 007 Effective	C	ID	3/3
OPTIONAL	CUR08	373	DATE Date (YYMMDD).	O	DT	6/6
NOT USED	CUR09	337	TIME	O	TM	4/4
CONDITIONAL	CUR10	374	DATE/TIME QUALIFIER Code specifying type of date or time, or both date and time. 036 Expiration	C	ID	3/3
OPTIONAL	CUR11	373	DATE Date (YYMMDD).	O	DT	6/6
NOT USED	CUR12 through CUR21					

	SEGMENT:	REF – REFERENCE NUMBERS
	LEVEL:	Header
OPTIONAL	REQ.DES :	Optional
12	MAX USE:	12
	LOOP:	0
	PURPOSE:	To specify identifying numbers.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. The "shipment chargeable" code applies to Navy Appropriation 17X4911. B. Applies when codes "2T" or "7T" are included in Appropriation Data. C. Additional codes which are authorized when contained in trading partner agreements are CO, DC, EQ, GC, IA, MS, RX, SE, WS, AM, CT, JB, OI, and RS.	REF01	128	REFERENCE NUMBER QUALIFIER Code qualifying the reference number. BL Government Bill of Lading Number BM Bill of Lading Number CJ Clause Number – Shipment Chargeable to Navy Appropriation – Navy Transaction Type Code (TC) SI Shipper's Identifying Number for Shipment (SID) TG Transportation Control Number (TCN) – Long-Line Accounting Data	M ID 2/2
CONDITIONAL	REF02	127	REFERENCE NUMBER Reference number or identification number as defined for a particular transaction set, or as specified by the reference number qualifier.	C AN 1/30
CONDITIONAL NOTE: A The long-line accounting data will normally be carried in REF02 In those cases where the data exceeds 30 characters in length, use REF03 to carry all of the data	REF03	352	DESCRIPTION A free-form description to clarify the related data elements and their content	C AN 1/80

	SEGMENT:	PER – ADMINISTRATIVE COMMUNICATIONS CONTACT
	LEVEL:	Header
Optional	REQ.DES.:	Optional
1	MAX USE:	3
	LOOP:	0
	PURPOSE:	To identify a person or office to whom administrative communications should be directed.
	SYNTAX NOTES:	If PER03 is present, then PER04 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Additional codes authorized for use when contained in trading partner agreements are: AR, AP, BD, and OC.	PER01	366	CONTACT FUNCTION CODE Code identifying the major duty or responsibility of the person or group named. IC Information Contact	M ID 2/2
OPTIONAL	PER02	93	NAME Free-form name.	O AN 1/35
OPTIONAL	PER03	365	COMMUNICATION NUMBER QUALIFIER Code identifying the type of communication number. AU AUTOVON – Defense Data Network (DDN) EM Electronic Mail FT Federal Telecommunications System (FTS) FX Facsimile IT International Telephone PS Packet Switching TE Telephone TL Telex TM Telemail TX TWX	O ID 2/2
CONDITIONAL	PER04	364	COMMUNICATION NUMBER Complete communications number including country or area code when applicable	C AN 7/21

	SEGMENT:	N1 – NAME
	LEVEL:	Header
NOTE: A. In most instances N101, N103, and N104 are to be used in lieu of using the N1 through N4 segments.	REQ.DES.:	Mandatory
	MAX USE:	1
	LOOP:	N1/200
	PURPOSE:	To identify a party by type of organization, name, and code.
	SYNTAX NOTES:	1. At least one of N102 or N103 must be present. 2. If either N103 or N104 is present, then the other is required.
	COMMENTS:	A. This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency, the "ID CODE" (N104) must provide a key to the table maintained by the transaction processing party.

Mandatory
1

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE(s): A. Code PR will be used for the Paying Office. B Code RI is used when transaction sent to a lock box.	N101	98	ENTITY ID CODE Code identifying an organizational entity or a physical location. – Administered by FR Message From PE Payee PR Payer RI Remit To ST Ship From TO Message To	M ID 2/2
CONDITIONAL	N102	93	NAME Free-form name	C AN 1/35
CONDITIONAL NOTE(s): A When N101 is for government entity, use code 10 When N101 is for contractor entity, use code 33.	N103	66	ID CODE QUALIFIER Code designating the system/method of code structure used for identification code (67) 10 Department of Defense Activity Address Code (DODAAC) 33 Commercial and Government Entity (CAGE)	C ID 1/2
CONDITIONAL	N104	67	ID CODE Code identifying a party	C ID 2/17

SEGMENT: N2 – ADDITIONAL NAME INFORMATION
LEVEL: Header
Optional REQ.DES.: Optional
2 MAX USE: 2
LOOP: N1
PURPOSE: To specify additional names or those longer than 35 characters in length.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	N201	93	NAME Free-form name.	M AN 1/35
OPTIONAL	N202	93	NAME Free-form name.	O AN 1/35

	SEGMENT:	N3 – ADDRESS INFORMATION
	LEVEL:	Header
Optional	REQ.DES.:	Optional
2	MAX USE:	2
	LOOP:	N1
	PURPOSE:	To specify the location of the named party.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	N301	166	ADDRESS Address Information.	M AN 1/35
OPTIONAL	N302	166	ADDRESS Address Information.	O AN 1/35

NOTE(s) A. The DoD uses DoD Manual 5000.12-M to specify country codes.

	SEGMENT: N4 – GEOGRAPHIC LOCATION
	LEVEL: Header
Optional	REQ.DES.: Optional
1	MAX USE: 1
	LOOP: N1
	PURPOSE: To specify the geographic place of the named party

SYNTAX NOTES:
1. At least one of N401 or N405 must be present.
2. If N401 is present, then N402 is required.
3. If either N405 or N406 is present, then the other is required.

COMMENTS:
A. A combination of either N401 through N404 (or N405 and N406) may be adequate to specify a location.
B. N402 is required only if city name (N401) is in the USA or Canada.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
CONDITIONAL	N401	19	CITY NAME Free-form text for city name.	C AN 2/19
CONDITIONAL	N402	156	STATE/PROVINCE CODE Code (standard State/Province) defined by appropriate governmental agency	C ID 2/2
OPTIONAL	N403	116	POSTAL CODE Code defining international postal zone code excluding punctuation and blanks (zip code for United States)	O ID 4/9
OPTIONAL NOTE: A. A translation table will be required to convert those standard codes used by ANSI to those used by DoD	N404	26	COUNTRY CODE Code identifying the country.	O ID 2/2
OPTIONAL	N405	309	LOCATION QUALIFIER Code identifying type of location	O ID 1/2
CONDITIONAL	N406	310	LOCATION IDENTIFIER Code which identifies a specific location	C AN 1/25

	SEGMENT:	REF – REFERENCE NUMBERS
	LEVEL:	Header
Optional	REQ.DES.:	Optional
6	MAX USE:	12
	LOOP:	N1
	PURPOSE:	To specify identifying numbers.
	SYNTAX NOTES:	1. Either REF02 or REF03 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	REF01	128	REFERENCE NUMBER QUALIFIER Code qualifying the reference number. LB Lock Box	M ID 2/2
CONDITIONAL	REF02	127	REFERENCE NUMBER Reference number or identification number as defined for a particular transaction set or as specified by the reference number qualifier.	C AN 1/30
NOT USED	REF03	352	DESCRIPTION	C AN 1/80

	SEGMENT:	PER – ADMINISTRATIVE COMMUNICATIONS CONTACT
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	3
	LOOP:	0
	PURPOSE:	To identify a person or office to whom administrative communications should be directed.
	SYNTAX NOTES:	1. If PER03 is present, then PER04 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Additional codes authorized for use when contained in trading partner agreements are: AR, AP, BD, and OC.	PER01	366	CONTACT FUNCTION CODE Code identifying the major duty or responsibility of the person or group named. IC Information Contact	M ID 2/2
OPTIONAL	PER02	93	NAME Free-form name.	O AN 1/35
OPTIONAL	PER03	365	COMMUNICATION NUMBER QUALIFIER Code identifying the type of communication number. AU AUTOVON – Defense Data Network (DDN) EM Electronic Mail FT Federal Telecommunications System (FTS) FX Facsimile IT International Telephone PS Packet Switching TE Telephone TL Telex TM Telemail TX TWX	O ID 2/2
CONDITIONAL	PER04	364	COMMUNICATION NUMBER Complete communications number including country or area code when applicable	C AN 7/21

NOTE: A. If no discount is applicable to the contract or order, do not transmit this segment.

Optional
1

SEGMENT: ITD – TERMS OF SALE/DEFERRED TERMS OF SALE
LEVEL: Header
REQ.DES.: Optional
MAX USE: 5
LOOP: 0
PURPOSE: To specify terms of sale.

SYNTAX NOTES: See ANSI standard.

COMMENTS: See ANSI standard.

DATA ELEMENT SUMMARY

	REF DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL	ITD01	336	TERMS TYPE CODE Code identifying type of payment terms.	O ID 2/2
OPTIONAL NOTE: A. Any applicable code can be used.	ITD02	333	TERMS BASIS DATE CODE Code identifying the beginning of the terms period	O ID 1/2
OPTIONAL	ITD03	338	TERMS DISCOUNT % Terms discount percentage, expressed as a percent, available to the purchaser if an invoice is paid on or before the terms discount due date	O R 1/6
CONDITIONAL	ITD04	370	TERMS DISCOUNT DUE DATE Date payment is due if discount is to be earned	C DT 6/6
OPTIONAL	ITD05	351	TERMS DISCOUNT DAYS DUE Number of days in the terms discount period by which payment is due if terms discount is earned	C NO 1/3
NOT USED	ITD06	446	TERMS NET DUE DATE	O DT 6/6
OPTIONAL	ITD07	386	TERMS NET DAYS Number of days until total invoice amount is due (discount not applicable)	O NO 1/3
OPTIONAL NOTE: A Used so that rounding-off methodology will not be a factor	ITD08	362	TERMS DISCOUNT AMOUNT Total amount of terms discount	O N2 1/10
NOT USED	ITD09 through ITD12			

CONDITIONAL	ITD13	765	DAY OF MONTH The numeric value of the day of the month between 1 and the maximum day of the month being referenced	C	NO	1/2
OPTIONAL NOTE: A. This data element will normally not be used in DoD applications.	ITD14	107	PAYMENT METHOD CODE Code identifying type of payment procedures.	O	ID	1/1

	SEGMENT:	DTM – DATE/TIME REFERENCE
	LEVEL:	Header
Optional	REQ.DES.:	Optional
1	MAX USE:	10
	LOOP:	0
	PURPOSE:	To specify pertinent dates and times.

SYNTAX NOTES: 1. At least one of DTM02 or DTM03 must be present.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Transaction creation date will be carried in the "GS" segment of the envelope.	DTM01	374	DATE/TIME QUALIFIER Code specifying type of date or time, or both date and time. 007 Effective 011 Shipped	M ID 3/3
CONDITIONAL	DTM02	373	DATE Date (YYMMDD)	C DT 6/6
NOT USED	DTM03	337	TIME	C TM 4/4
NOT USED	DTM04	623	TIME CODE	O ID 2/2

	SEGMENT:	FOB - F.O.B. RELATED INSTRUCTIONS
	LEVEL:	Header
Optional	REQ.DES.:	Optional
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To specify transportation instructions relating to shipment.
	SYNTAX NOTES:	See ANSI standard.
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	FOB01	146	SHIPMENT METHOD OF PAYMENT Code identifying payment terms for transportation charges. -- Paid by Seller - Paid by Buyer	M ID 2/2
CONDITIONAL	FOB02	309	LOCATION QUALIFIER Code identifying type of location. DE Destination OR Origin	C ID 1/2
NOT USED	FOB03 through FOB09			

	SEGMENT:	IT1 - BASELINE ITEM DATA (INVOICE)
	LEVEL:	Detail
Mandatory	REQ.DES :	Mandatory
1	MAX USE:	1
	LOOP:	IT1/200000
	PURPOSE:	To specify the basic and most frequently used line item data for the invoice and related transactions.
	SYNTAX NOTES:	See ANSI Standards.
	COMMENTS:	See ANSI Standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
OPTIONAL NOTE(s): A. CLIN or ELIN.	IT101	350	ASSIGNED IDENTIFICATION Alphanumeric characters assigned for differentiation within a transaction set.	O	AN	1/6
MANDATORY	IT102	358	QUANTITY INVOICED Number of units invoiced (supplier units).	M	R	1/10
MANDATORY NOTE(s): A. DoD uses DoD Manual 5000.12-M. IT301/302 can be used for an alternate unit of measure.	IT103	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement.	M	ID	2/2
MANDATORY NOTE: A. The extended amount of each line item and the total amount of the contract are to be calculated by application program.	IT104	212	UNIT PRICE Price per unit of product, service, commodity, etc.	M	R	1/14
OPTIONAL	IT105	639	BASIS UNIT PRICE CODE Code identifying the type of unit price for an item.	O	ID	2/2
OPTIONAL	IT106	235	PRODUCT/SERVICE ID QUALIFIER Code identifying the type/source of the descriptive number used in product/service ID (234). CN Commodity Name FS Federal Stock Classification and/or NSN PN Company Part Number	O	ID	2/2

CONDITIONAL	IT107	234	PRODUCT/SERVICE ID Identifying number for a product or service	C	AN	1/30
OPTIONAL	IT108	235	PRODUCT/SERVICE ID QUALIFIER Code identifying the type/source of the descriptive number used in product/service ID (234).	O	ID	2/2
CONDITIONAL	IT109	234	PRODUCT/SERVICE ID Identifying number for a product or service.	C	AN	1/30

NOTE: A. DATA ELEMENTS IT110 THROUGH 1T125 WILL BE USED AS NECESSARY.

	SEGMENT:	IT3 - ADDITIONAL ITEM DATA
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
5	MAX USE:	5
	LOOP:	IT1
	PURPOSE:	To specify additional item details relating to variations between ordered and shipped quantities, or to specify alternate units of measures and quantities.
	SYNTAX NOTES:	1. If IT301 is present, then IT302 is required. 2. At least one of IT301, IT303, IT304, or IT305 must be present.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
CONDITIONAL	IT301	382	NUMBER OF UNITS SHIPPED Numeric value of units shipped in manufacturer's shipping units for a line item or transaction set.	C R 1/10
CONDITIONAL Use when contract unit of measure differs from shipped or invoiced unit of measure.	IT302	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement.	C ID 2/2
NOT USED	IT303 through IT305			

	SEGMENT:	PID – PRODUCT/ITEM DESCRIPTION
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	1000
	LOOP:	PID/1000
	PURPOSE:	To describe a product or process in coded or free-form format.
	SYNTAX NOTES:	See ANSI Standard.
	COMMENTS:	See ANSI Standard.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	PID01	349	ITEM DESCRIPTION TYPE Code indicating the format of a description.	M ID 1/1
OPTIONAL	PID02	750	PRODUCT/PROCESS CHARACTERISTIC CODE Code specifying the product or process characteristic being described.	O ID 2/3
CONDITIONAL	PID03	559	ASSOCIATION QUALIFIER CODE Code identifying the association assigning the code values.	C ID 2/2
CONDITIONAL	PID04	751	PRODUCT DESCRIPTION CODE A code from an industry code list which provides specific data about a product characteristic.	C ID 1/12
CONDITIONAL	PID05	352	DESCRIPTION A free-form description to clarify the related data elements and their content.	C AN 1/80
NOT USED	PID06			

SEGMENT: MEA – MEASUREMENTS
LEVEL: Detail
Optional REQ.DES.: Optional
10 MAX USE: 10
LOOP: PID
PURPOSE: To specify physical measurements, including dimensions, tolerances, weights, and counts.

SYNTAX NOTES:
01. Either MEA03 or MEA05 or MEA06 or MEA08 is required.
02. If either MEA03, MEA05, or MEA06 is used, MEA04 is required.
03. If MEA07 is used, then MEA03, MEA05 or MEA06 is required.
04. Either MEA08 or MEA03 may be used, but not both

COMMENTS:
A. When citing dimensional tolerances, any measurement requiring a sign (+ or –), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (–) value and MEA06 as the positive (+) value.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL	MEA01	737	MEASUREMENT REFERENCE ID CODE Code specifying the application of physical measurement cited.	O ID 2/2
OPTIONAL	MEA02	738	MEASUREMENT QUALIFIER Code identifying the type of measurement	O ID 1/3
CONDITIONAL	MEA03	739	MEASUREMENT VALUE The value of the measurement.	C R 1/10
CONDITIONAL	MEA04	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement.	C ID 2/2
CONDITIONAL NOTE: A. Use for variation in quantity.	MEA05	740	RANGE MINIMUM The value specifying the minimum of the measurement range.	C R 1/10
CONDITIONAL NOTE: A. Use for variation in quantity.	MEA06	741	RANGE MAXIMUM The value specifying the maximum of the measurement range.	C R 1/10
NOT USED	MEA07	935	MEASUREMENT SIGN CODE	O ID 2/2
NOT USED	MEA08	936	MEASUREMENT ATTR CODE	C ID 2/2
NOT USED	MEA09	752	SURFACE/LAYER POSITION CODE	O ID 2/2

	SEGMENT:	TDS – TOTAL MONETARY VALUE SUMMARY
	LEVEL:	Summary
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To specify the total invoice discounts and amounts
	COMMENTS:	TDS02 is required if the dollar value subject to discount is not equal to the dollar value of TDS01.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	TDS01	361	TOTAL INVOICE AMOUNT Amount of invoice (including charges, less allowances) before terms discount (if discount is applicable).	M N2 1/10
CONDITIONAL NOTE: A. This can be used for price breaks or volume discounts.	TDS02	390	AMOUNT SUBJECT TO TERMS DISCOUNT Amount upon which the terms discount amount is calculated.	C N2 1/10
OPTIONAL NOTE; A. Also can be used to eliminate issue of rounding off amounts.	TDS03	391	DISCOUNTED AMOUNT DUE Amount of invoice due if paid by terms discount due date (total invoice or installment amount less cash discount).	O N2 1/10
OPTIONAL NOTE; A. See note A for TDS03.	TDS04	362	TERMS DISCOUNT AMOUNT Total amount of terms discount.	O N2 1/10

	SEGMENT:	CTT – TRANSACTION TOTALS
	LEVEL:	Summary
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To transmit a hash total for a specific element in the transaction set.
	SYNTAX NOTES:	See ANSI standard.
	COMMENTS:	See ANSI Standard.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE(s): A. An accumulation of the total number of IT1 segments.	CTT01	354	NUMBER OF LINE ITEMS Total number of line items in the transaction set.	M NO 1/6
OPTIONAL NOTE: A. CTT02 is the sum of the value of quantities invoiced (IT102) for the total number of IT1 segments.	CTT02	347	HASH TOTAL Sum of the values of the specified data element	O R 1/10
NOT USED	CTT03 through CTT07			

	SEGMENT:	SE – TRANSACTION SET TRAILER
	LEVEL:	Summary
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments).
	COMMENTS:	SE is the last segment of each transaction set.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	SE01	96	NUMBER OF INCLUDED SEGMENTS Total number of segments included in a transaction set including ST and SE segments.	M NO 1/6
MANDATORY NOTE(s): A. This is the same number as appears in ST02.	SE02	329	TRANSACTION SET CONTROL NUMBER Identifying control number assigned by the originator for a transaction set.	M AN 4/9

856 Ship Notice/Manifest

FUNCTIONAL GROUP ID = SH

This standard provides the standardized format and establishes the data contents of a ship notice/manifest transaction set. A ship notice/manifest lists the contents of a shipment of goods as well as additional information relating to the shipment, such as order information, product description, physical characteristics, type of packaging, marking, carrier information, and configuration of goods within the transportation equipment. The transaction set enables the sender to describe the contents and configuration of a shipment in various levels of detail and provides an ordered flexibility to convey information.

The sender of this transaction is the organization responsible for detailing and communicating the contents of a shipment, or shipments, to one or more receivers of the transaction set. The receiver of this transaction set can be any organization having an interest in the contents of a shipment or information about the contents of a shipment.

Table 1

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	ST	Transaction Set Header	M	1			
020	BSN	Beginning Segment for Ship Notice	M	1			
030	NTE	Note/Special Instruction	F	100			
040	DTM	Date/Time Reference	O	10			

Table 2

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	HL	Hierarchical Level	M	1	HL/200000		Comment A
020	LIN	Item Identification	O	1			
030	SN1	Item Detail (Shipment)	O	1			
040	SLN	Subline Item Detail	O	100			
050	PRF	Purchase Order Reference	O	1			
060	PO4	Item Physical Details	O	1			
070	PID	Product/Item Description	O	200			
080	MEA	Measurements	O	40			
090	PWK	Paperwork	O	25			
100	PKG	Marking, Packaging, Loading	O	25			
110	TD1	Carrier Details (Quantity and Weight)	O	20			
120	TD5	Carrier Details (Routing Sequence/Transit Time)	O	12			
130	TD3	Carrier Details (Equipment)	O	12			
140	TD4	Carrier Details (Special Handling/Hazardous Materials)	O	5			
150	REF	Reference Numbers	O	200			
160	PER	Administrative Communications Contact	O	1			
170	CLD	Load Detail	O	1	CLD/200		

180	REF	Reference Numbers	O	200	
190	MAN	Marks and Numbers	O	10	
200	DTM	Date/Time Reference	O	10	
210	FOB	F.O.B. Related Instructions	O	1	
220	N1	Name	O	1	N1/200
230	N2	Additional Name Information	O	2	
240	N3	Address Information	O	2	
250	N4	Geographic Location	O	1	
260	REF	Reference Numbers	O	12	
270	PER	Administrative Communications Contact	O	3	
280	FOB	F.O.B. Related Instructions	O	1	
290	SDQ	Destination Quantity	O	50	
300	ETD	Excess Transportation Detail	O	1	
310	CUR	Currency	O	1	
320	ITA	Allowance, Charge or Service	O	10	

Comment A: The HL segment is the only mandatory segment within the HL loop, and by itself, the HL segment has no meaning.

Table 3

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	CTT	Transaction Totals	M	1			Note 1
020	SE	Transaction Set Trailer	M	1			

Note 1: Number of line items (CTT01) is the accumulation of the number of HL segments. If used, hash total (CTT02) is the sum of the value of units shipped (SN102) for each SN1 segment.

	SEGMENT:	ST - TRANSACTION SET HEADER
	LEVEL:	Header
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the start of a transaction set and to assign a control number

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	ST01	143	TRANSACTION SET ID CODE Code uniquely identifying a transaction set. 856 Ship Notice/Manifest	M ID 3/3
MANDATORY	ST02	329	TRANSACTION SET CONTROL NUMBER Identifying control number assigned by the originator for a transaction set.	M AN 4/9

	SEGMENT:	BSN - BEGINNING SEGMENT FOR SHIP NOTICE
	LEVEL:	Header
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To transmit identifying numbers, dates, and other basic data relating to the transaction set.
	COMMENTS:	A. BSN03 is the date the shipment transaction is created. B. BSN04 is the time the shipment transaction is created.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Because of errors or omissions, it may be necessary to retransmit this transaction. The retransmission, containing mandatory and corrected data elements, will be transmitted to all recipients of the original transaction affected by the change. New codes needed to support some of MILSCAP Appendix A22 and the shipment performance notification transaction	BSN01	353	TRANSACTION SET PURPOSE CODE Code identifying the purpose of a transaction set. 00 Original 01 Cancellation 05 Replace 06 Confirmation 07 Duplicate 14 Advance Notification - Request for a Corrected Transaction - Physically completed - First follow-up - Second follow-up - Corrected Transaction Verified by Authorized Government Representative	M ID 2/2
MANDATORY NOTE: A. Includes three alpha character shipment number prefix, and four numeric or alpha/numeric character serial number. The three character alpha prefix is controlled and assigned by the prime contractor, e.g., TQY. The shipment number prefix should be different for each "shipped from" address and should remain constant throughout the life of the contract/order.	BSN02	396	SHIPMENT IDENTIFIER A unique control number assigned by the original shipper to identify a specific shipment	M AN 2/30

B. The first shipment for each location against a contract/order must be numbered 0001 with subsequent shipments being numbered consecutively. When multiple tank-car or tank-truck loads are consolidated on a single DD Form 250, all loads covered by the single DD Form 250 will be considered as one shipment. Only one shipment number should be shown.
C. If control data elements such as CLIN, ELIN (LIN01) or quantity, (SDQ04) being corrected, approval of the authorized Government Representative must be obtained prior to the retransmission.
D. For final deliveries, a "Z" immediately following the shipment number indicates the last shipment against the contract/order has been made, e.g., TDY005Z.
E. Reassign the shipment number of the initial shipment where a "replacement shipment" is involved

MANDATORY	BSN03	373	DATE Date (YYMMDD)	M	DT	6/6
MANDATORY NOTE: A This time will be generated by system software	BSN04	337	TIME Time expressed in 24-hour clock time (HHMM, time range 0000 through 2359)	M	TM	4/4

GENERAL NOTE: A new segment needs to be developed, to carry codes and explanations (when applicable), which represent a variety of contract conditions. These codes would represent various contractor certifications, contract conditions, and statuses to recipients of the transaction. The transaction should have a maximum use of 40, or its key data element should be large enough to accommodate a reasonable number of the following codes. The codes needed are:

- Discount Applicable
- Shipped with Missing Components
- Shipment Consists of Components Missing on a Prior Shipment
- Shipment Involves Returnable Items
- Test Results Not Available Prior to Shipment
- Clothing & Textile Contract with a Bailment Clause
- Shipment Includes the Initial Unit Incorporating a Value Engineering Change Proposal
- Alternate Release Procedure Applies
- Shipment Subject to Certificate of Conformance
- Fast Pay Procedures Apply
- National Stock Number Not Cited in Contract
- Shipment of Material Not Involved
- Shipment Chargeable to Navy Appropriation 17X4911
- Navy Transaction Type Code (TC) "2T" or "7T" Included in Appropriation Data
- TCN Assigned to Each Line Item
- Items Required for Control Purposes
- Government-Furnished Property Involved
- Shipment of Material Not Involved
- Contract Contains a Liquidated Damages Clause
- MILSTRIP Document Number Differs From Contract
- Final Quantity Shipped Exceeds Quantity Variance for this CLIN
- Mark-For Differs From Contract
- Two or More Control Data Elements Do Not Match the Contract
- Two Noncontrol Data Elements Do Not Match the Contract
- Ship-To Code Differs From Contract
- Stock Number/Part Number Differs From Contract
- Unit Price(s) Not Available
- Shipment Instructions Not Confirmed by Contract Modification Prior to Shipment
- Final Shipment with Variation in Quantity Clause and Underrun Condition

New Segment Might Look Like:

	XXX01 XX		XXX02 352	
XXX	Contract Condition Code	*	Description	N/L
	M ID 2/2		O AN 1/80	

Segment to have a maximum use of 40. The description data element would contain such items as lists of missing components, returnable items, etc. This element is preferred over using the "NTE" segment and a free-form description. For example, if a shipment is chargeable to Navy Appropriation 17X4911, enter the Bureau Control Number (BCN) and authorization accounting activity (AAA) number. As an alternative, data element XXX02 could be used to carry "strings" of codes, thus making the maximum use less

	SEGMENT:	NTE – NOTE/SPECIAL INSTRUCTION
	LEVEL:	Header
Optional	REQ.DES.:	Floating
100	MAX USE:	100
	LOOP:	0
	PURPOSE:	To transmit information in a free-form format, if necessary, for co or special instruction.
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUT
OPTIONAL	NTE01	363	NOTE REFERENCE CODE Code identifying the functional area or purpose for which the note applies. Gen Entire Transaction Set	O ID
MANDATORY	NTE02	3	FREE-FORM MESSAGE Free-form text.	M AN

GENERAL NOTE: In addition to other potential uses of this segment, it will be used to provide explanations requir codes which may be used in the new segment developed to support various contract conditions. The "NTE" segmer be used for this purpose, only when no other alternative method is available within the 856 transaction set, e.g., w shipment is made without an NSN at the direction of the contracting officer, use NTE02 to enter the authority fc shipment.

NOTE: A. A conversion table will be required by DoD because policy requires a date filed different than the ANSI YYMMDD standard.

Optional
1

SEGMENT: DTM - DATE/TIME REFERENCE
LEVEL: Header
REQ.DES.: Optional
MAX USE: 10
LOOP: 0
PURPOSE: To specify pertinent dates and times.

SYNTAX NOTES: 1. At least one of DTM02 or DTM03 must be present.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Code 011 is the date shipped (the date shipment was released to carrier) or the date performed, (completed), if a service is being described. Code 017 is the estimated date of delivery or performance. Use code - when the actual shipment date is not known.	DTM01	374	DATE/TIME QUALIFIER Code specifying type of date or time, or both date and time. 011 Shipped 017 Estimated Delivery - Estimated Shipment Date	M ID 3/3
CONDITIONAL	DTM02	373	DATE Date (YYMMDD)	C DT 6/6
NOT USED	DTM03	337	TIME	C TM 4/4
NOT USED	DTM04	623	TIME CODE	O ID 2/2

	SEGMENT:	HL – HIERARCHICAL LEVEL
	LEVEL:	Detail
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0100
	LOOP INDEX:	HL/200000
	PURPOSE:	To identify dependencies among, and the content of, hierarchically related groups of data segments
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Sequence number.	HL01	628	HIERARCHICAL ID NUMBER A unique number assigned by the sender to identify a particular data segment in a hierarchical structure.	M AN 1/12
OPTIONAL NOTE: A. Not used the first time, but used the second and subsequent times.	HL02	734	HIERARCHICAL PARENT ID Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to.	O AN 1/12
MANDATORY	HL03	735	HIERARCHICAL LEVEL CODE Code defining the characteristic of a level in a hierarchical structure. S Shipment O Order T Shipping Tare P Pack (Carton) Q Subpack I Item	M ID 1/2
OPTIONAL	HL04	736	HIERARCHICAL CHILD CODE Code indicating whether there are hierarchical child data segments subordinate to the level being described.	O ID 1/1

	SEGMENT:	LIN – ITEM IDENTIFICATION
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	1
	LOOP:	HL
	PURPOSE:	To specify basic item identification data
	SYNTAX NOTES:	See ANSI standards.
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
REQUIRED NOTE: A. This element carries the CLIN or ELIN. B. If less than 4 digits, system software will prefix with zeros to achieve 4 digits, e.g., 0001. C. The HL loop must cycle for every different number carried in LIN01. In this way every contract CLIN or ELIN will be picked-up in the transaction.	LIN01	350	ASSIGNED IDENTIFICATION	O AN 1/6
MANDATORY	LIN02	235	PRODUCT/SERVICE ID QUALIFIER Code identifying the type/source of the descriptive number used in Product/Service ID (234). FS Federal Stock Classification and/or National Stock Number SV Service Rendered VP Vendor's (Seller's) Part Number __ MILSTRIP Document Number	M ID 2/2
MANDATORY NOTE: A. Data elements LIN04-31 will be used to convey additional item identification data. It may also carry explanations where they can be conveniently described herein, rather than in the "NTE" or a new segment	LIN03	234	PRODUCT/SERVICE ID Identifying number for a product or service	M AN 1/30

NOTE: A. A second use of the segment will be required when another unit of measure is used for reasons other than payment, e.g., when the shipped UOM is different than the contract-ordered UOM.

SEGMENT:	SN1 – ITEM DETAIL (SHIPMENT)
LEVEL:	Detail
REQ.DES.:	Optional
MAX USE:	1
LOOP:	HL
PURPOSE:	To specify line-item detail relative to the shipment.

Optional
1

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
NOT USED	SN101	350	ASSIGNED IDENTIFICATION	O AN 1/6
MANDATORY	SN102	382	NUMBER OF UNITS SHIPPED Numeric value of units shipped in manufacturer's shipping units for a line-item or transaction set.	M R 1/10

NOTE: A. If MILSTRIP requisition numbers are shown, the quantity shipped and unit of measure are recorded against each requisition number, not the item number. If it is the final shipment of a line item of a contract containing variation in quantity clause and an underrun condition exists, the prime contractor, or the subcontractor preparing the transaction at the direction of the prime contractor, shall enter a "Z" following the last digit of the quantity shipped for that line. As an alternative procedure, the prime contractor can prepare a corrected transaction, adding the "Z" in the appropriate place.
B. If a replacement shipment is involved, enter below the last digit of the quantity, the letter "A" to designate the first replacement, "B" for the second replacement, etc., final shipment "Z" on underrun should not be used when a final line-item shipment is replaced.

MANDATORY NOTE: A. DoD uses DoD Manual S000 12-M.	SN103	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement	M ID 2/2
NOT USED	SN104 through SN108			

GENERAL NOTE: A second unit of measure data element should be added to handle the situation where one is cited for reasons other than payment

Here an "AMT" segment needs to be added to allow for the transmission of the unit prices when the transmission of those prices is required by DoD policy (e.g., for Navy contracts)

The new segment might be added as follows:

	SEGMENT:	AMT - MONETARY AMOUNT
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	1
	LOOP:	HL
	PURPOSE:	To indicate the total monetary amount.
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Use code - when segment - is code -.	AMT01	522	AMOUNT QUALIFIER CODE Code to qualify amount. 1 Line Item Total - Unit Price - Estimated Unit Price - Cited GFP Unit Value	M ID 1/2
MANDATORY	AMT02	782	MONETARY AMOUNT Monetary amount	M R 1/15

	SEGMENT:	PRF – PURCHASE ORDER REFERENCE
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	1
	LOOP:	HL
	PURPOSE:	To provide reference to a specific purchase order.
	SYNTAX NOTE:	1. Either PRF01 or PRF06 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. A schedule against which an order has been placed, even when placed on a non-DoD schedule.	PRF01	324	PURCHASE ORDER NUMBER Identifying number assigned by the purchaser.	M AN 1/22
OPTIONAL NOTE: A. Will contain the call/order number, and an amendment number if appropriate.	PRF02	328	RELEASE NUMBER Number identifying a release against a purchase order previously placed by the parties involved in the transaction	O AN 1/30
B. When shipping instructions are furnished by telephone or message, they should be confirmed by a contract modification stamped "confirmation," within 5 days. If shipment is made prior to receipt of a confirming modification, the six-digit modification serial number or the two-digit call/order modification indicator will be entered in PRF03 or PRF02 as appropriate. These numbers will be provided by the contracting officer in a telephone call or message				
OPTIONAL NOTE: A. Will contain the contract modification number	PRF03	327	CHANGE ORDER SEQUENCE NUMBER Number assigned by the orderer identifying a specific change or revision to a previously transmitted transaction set	O AN 1/8
NOT USED	PRF04-05			
OPTIONAL NOTE: A. This data element carries the contract number, PIIN. The SPIIN will be carried in data element PRF02 as appropriate	PRF06	367	CONTRACT NUMBER Contract number	O AN 1/30

SEGMENT: P04 – ITEM PHYSICAL DETAILS
LEVEL: Detail
Optional REQ.DES.: Optional
1 MAX USE: 1
LOOP: HL
PURPOSE: To specify the physical qualities, packaging, weights, and dimensions relating to the item.

SYNTAX NOTES:
1. If P0402 is present, then P0403 is required.
2. If P0405 is present, then at least one of P0406 or P0407 is required.
3. If P0408 is present, then P0409 is required.
4. If P0413 is present, then at least one of P0410, P0411, or P0412 is required.

COMMENTS: See ANSI standards.

DATA ELEMENT SUMMARY

	REF DES.	DATA ELEMENT	NAME	ATTRIBUTES		
OPTIONAL	P0401	356	PACK Number of inner pack units per outer pack unit.	O	NO	1/6
OPTIONAL	P0402	357	SIZE Size of supplier units in pack	O	R	1/8
CONDITIONAL	P0403	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement	C	ID	2/2
OPTIONAL	P0404	103	PACKAGING CODE Code identifying the type of packaging Part 1 Packaging form Part 2 Packaging material	O	ID	5/5
OPTIONAL	P0405	187	WEIGHT QUALIFIER Code identifying the type of weight	O	ID	1/2
CONDITIONAL	P0406	384	GROSS WEIGHT PER PACK Numeric value of gross weight per pack	C	R	1/9
CONDITIONAL	P0407	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement	C	ID	2/2
OPTIONAL	P0408	385	GROSS VOLUME PER PACK Numeric value of gross value per pack	O	R	1/9
CONDITIONAL	P0409	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement	C	ID	2/2
OPTIONAL	P0410	82	LENGTH Largest horizontal dimension of an object measured when the object is in the upright position	O	R	1/6

OPTIONAL	P0411	189	WIDTH Shorter measurement of the two horizontal dimensions measured with the object in the upright position.	O	R	1/8
OPTIONAL	P0412	65	HEIGHT Vertical dimension of an object measured when the object is in the upright position.	O	R	1/6
CONDITIONAL	P0413	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement.	C	ID	2/2

	SEGMENT:	PID - PRODUCT/ITEM DESCRIPTION
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	200
	LOOP:	HL
	PURPOSE:	To describe a product or process in coded or free-form format.
	SYNTAX NOTES:	See ANSI standards.
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	PID01	349	ITEM DESCRIPTION TYPE Code indicating the format of a description. F Free-form	M ID 1
NOT USED	PID02-04			
CONDITIONAL NOTE: When LIN02 is code "SV", PID05 may carry an additional free-form description of the DoD contracted services, if necessary. It may also be used for an explanation of a contract condition, in lieu of using the "NTE" segment.	PID05	352	DESCRIPTION A free-form description to clarify the related data elements and their content	C AN 1/80
NOT USED	PID06			

SEGMENT: MEA - MEASUREMENTS
LEVEL: Header
Optional REQ.DES.: Optional
40 MAX USE: 40
LOOP: HL
PURPOSE: To specify physical measurements, including dimensions, tolerances, weights, and counts.

SYNTAX NOTES:
1. Either MEA03 or MEA05 or MEA06 or MEA08 is required.
2. If either MEA03, MEA05, or MEA06 is used, MEA04 is required.
3. If MEA07 is used, then MEA03, MEA05 or MEA06 is required.
4. Either MEA08 or MEA03 may be used, but not both.

COMMENTS:
A. When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value, and MEA06 as the positive (+) value.

DATA ELEMENT SUMMARY

	REF DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL NOTE: A. For all DCMC-administered contracts and FMS/MAP shipments except contracts containing the "Fast Pay" clause.	MEA01	737	MEASUREMENT REFERENCE ID CODE Code specifying the application of physical measurement cited. WT Weights.	O ID 2/2
OPTIONAL	MEA02	738	MEASUREMENT QUALIFIER Code identifying the type of measurement. G Gross Weight.	O ID 1/3
See block 16, DD Form 250, for all DCMC-administered contracts except those containing the Fast Pay clause and for FMS/MAP shipments.				
CONDITIONAL	MEA03	739	MEASUREMENT VALUE The value of the measurement.	C R 1/10
CONDITIONAL	MEA04	355	UNIT OF MEASURE CODE Code identifying the basic unit of measure. PG Pounds Gross	C ID 2/2
NOT USED	MEA05	740	RANGE MINIMUM	C R 1/10
NOT USED	MEA06	741	RANGE MAXIMUM	C R 1/10
NOT USED	MEA07	935	MEASUREMENT SIGN CODE	O ID 2/2
NOT USED	MEA08	936	MEASUREMENT ATTR CODE	C ID 2/2
NOT USED	MEA09	752	SURFACE/LAYER POSITION CODE	O ID 2/2

	SEGMENT:	PWK - PAPERWORK
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
25	MAX USE:	25
	LOOP:	HL
	PURPOSE:	To specify the type and transmission of the paperwork relating to product, order or report.
	SYNTAX NOTES:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Use when additional paperwork will have to accompany the shipment, or will have to follow under separate cover.	PWK01	755	REPORT TYPE CODE Code indicating the title and/or contents of a document or report. MR Material Inspection and Receiving Report SN Shipping Notice	M ID 2/2
MANDATORY	PWK02	756	REPORT TRANSACTION CODE Code defining timing and transmission method by which reports are to be sent.	M ID 2/2
OPTIONAL	PWK03	757	REPORT COPIES NEEDED The number of copies of a report that should be sent to the addressee	O NO 1/2
OPTIONAL	PWK04	98	ENTITY ID CODE Code identifying an organizational entity or a physical location. PG Prime Contractor	O ID 2/2
CONDITIONAL	PWK05	66	ID CODE QUALIFIER Code designating the system/method of code structure used for identification code (67) 33 Commercial and Government Entity (CAGE)	C ID 1/2
CONDITIONAL	PWK06	67	IDENTIFICATION CODE Code identifying a party	C ID 2/17
OPTIONAL	PWK07	352	DESCRIPTION A free-form description to clarify the related data elements and their content	O AN 1/80
NOT USED	PWK08	704	PAPER/REPORT ACTION CODE	O ID 1/2

	SEGMENT:	PKG – MARKING, PACKAGING, LOADING
	LEVEL:	Detail
Optional	REQ.DES..	Optional
25	MAX USE:	25
	LOOP:	HL
	PURPOSE:	To describe marking, packaging, loading, and unloading requirements
	SYNTAX NOTES:	See ANSI standards
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
MANDATORY	PKG01	349	ITEM DESCRIPTION CODE Code indicating the format of a description. F Free-form	M	ID	1/1
OPTIONAL	PKG02	753	PACKAGING CHARACTERISTIC CODE Code specifying the marking, packaging, loading, and related characteristics being described	O	ID	1/5
CONDITIONAL *	PKG03	348	ITEM DESCRIPTION QUALIFIER Code identifying agency responsible for the code use.	C	ID	2/2
CONDITIONAL	PKG04	754	PACKAGING DESCRIPTION CODE A code from an industry code list which provides specific data about the marking, packaging, or loading and unloading of a product.	C	ID	1/7
CONDITIONAL	PKG05	352	DESCRIPTION A free-form description to clarify the related data elements and their content	C	AN	1/80

** NOTE: A. DE 348 will be deleted from the next ASC X12 release.*

	SEGMENT:	TD1 – CARRIER DETAILS (QUANTITY AND WEIGHT)
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
20	MAX USE:	20
	LOOP:	HL
	PURPOSE:	To specify the transportation details relative to commodity, weight, and quantity
	.SYNTAX NOTES:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL	TD101	103	PACKAGING CODE Code identifying the type of packaging. Part 1. Packaging form. Part 2. Packaging material.	O ID 5/5
CONDITIONAL NOTE: A This segment carries t· total number of sh·pping containers.	TD102	80	LADING QUANTITY Number of units (pieces) of the lading commodity.	C NO 1/7
OPTIONAL	TD103	23	COMMODITY CODE QUALIFIER Code identifying the commodity coding system used for commodity code.	O ID 1/1
CONDITIONAL	TD104	22	COMMODITY CODE Code describing a commodity or a group of commodities.	C ID 1/16
OPTIONAL	TD105	7[illegible]	LADING DESCRIPTION Description of an item as required for rating and billing purposes.	O AN 1/50
OPTIONAL	TD106	187	WEIGHT QUALIFIER Code defining the type of weight	O ID 1/2
CONDITIONAL	TD107	81	WEIGHT Numeric value o´ weight	C R 1/8
CONDITIONAL	TD108	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement	C ID 2/2

	SEGMENT:	TD5 – CARRIER DETAILS (ROUTING SEQUENCE/TRANSIT TIME)
	LEVEL:	Detail
Optional	REQ.DES.:	
12	MAX USE:	12
	LOOP:	HL
	PURPOSE:	To specify the carrier, sequence of routing and to provide transit-time information.
	SYNTAX NOTES:	See ANSI standards.
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL	TD501	133	ROUTING SEQUENCE CODE Code describing the relationship of a carrier to a specific shipment movement.	O ID 1/2
CONDITIONAL	TD502	66	ID CODE QUALIFIER Code designating the system/method of code structure used for identification code (67). 33 Commercial and Government Entity (CAGE)	C ID 1/2
CONDITIONAL	TD503	67	IDENTIFICATION CODE Code identifying a party.	C ID 2/17
CONDITIONAL NOTE: Codes found in DFARS Appendix I-302 must be converted into corresponding ANSI codes for data element 91. At least 7 DFARS codes (6, 7, U, D, R, T, and N) do not have equivalents in ANSI. These codes were added as codes 6, 7, AQ, DW, ED, FA, and LA. Code "ZZ" is defined as "not applicable for this transaction"	TD504	91	TRANSPORTATION METHOD CODE Code specifying the method of transportation for the shipment. 6 Military Official Mail (MOM) 7 Express Mail A Air AC Air Charter AE Air Express AQ Quicktrans B Barge BU Bus C Consolidation CE Customer Pickup/Customer's Expense D Parcel Post DW Driveaway, Truckaway, Towaway* E Expedited Truck ED European Distribution System/Pacific Distribution System FA Air Freight Forwarder H Customer Pickup I Common Irregular Carrier J Motor L Contract Carrier LA Logair	C ID 1/2

			LT Less Than Trailer Load (LTL) O Containerized Ocean P Private Carrier PC Private Carrier Q Conventional Ocean R Rail RC Less Than Carload [Includes TOFC/COFC (excluding Seavan)] S Ocean SR Supplier Truck T Best Way (Shippers Option) U Private Parcel Service W Inland Waterway X Intermodal (Piggyback) Y Military Intratheater Airlift Service ZZ Mutually Defined			
CONDITIONAL	TD505	387	ROUTING Free-form description of the routing or requested routing for shipment, or the originating carrier's identity.	C	AN	1/35
OPTIONAL	TD506	368	SHIP/ORDER STATUS CODE Code indicating the status of an order or shipment or the disposition of any difference between the quantity ordered and the quantity shipped for a line item transaction. - Component Missing - Missing Components Furnished - Quantity Increase - Quantity Decrease - Replacement Shipment - Shipped and Held in Bond at Contractor's Plant - Shipped and Held as GFP - Shipped or Performed as Indicated - Underrun Quantity	O	ID	2/2
OPTIONAL	TD507	309	LOCATION QUALIFIER Code identifying type of location	O	ID	1/2
CONDITIONAL	TD508	310	LOCATION IDENTIFICATION Code which identifies a specific location	C	AN	1/25
OPTIONAL	TD509	731	TRANSIT DIRECT CODE The point of origin and the point of direction	O	ID	2/2
OPTIONAL	TD510	732	TRANSIT TIME DIRECT QUALIFIER Code specifying the value of time used to measure the transit time	O	ID	2/2
CONDITIONAL	TD511	733	TRANSIT TIME The numeric amount of transit time	C	R	1/4

SEGMENT: TD3 - CARRIER DETAILS (EQUIPMENT)
Optional REQ.DES.: Optional
1 MAX USE: 12
LOOP: HL
PURPOSE: To specify transportation details related to the equipment used by the carrier.

SYNTAX NOTES: See ANSI standard.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	TD301	40	EQUIPMENT DESCRIPTION CODE Code identifying type of equipment used for shipment.	M ID 2/2
OPTIONAL	TD302	206	EQUIPMENT INITIAL Prefix or alphabetic part of an equipment unit's identifying number.	O AN 1/4
CONDITIONAL	TD303	207	EQUIPMENT NUMBER Sequencing or serial part of an equipment unit's identifying number.	C AN 1/10
OPTIONAL	TD304	187	WEIGHT QUALIFIER Code identifying the type of weight.	O ID 1/2
CONDITIONAL	TD305	81	WEIGHT Numeric value of weight.	C R 1/8
CONDITIONAL	TD306	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement.	C ID 2/2
OPTIONAL	TD307	102	OWNERSHIP CODE Code indicating the relationship of equipment to carrier	O ID 1/1

	SEGMENT:	TD4 - CARRIER DETAILS (SPECIAL HANDLING/HAZARDOUS MATERIALS)
	LEVEL:	ID - 0100 INDEX - 0
Optional	REQ.DES.:	Optional
5	MAX USE:	5
	LOOP:	ID - 0100 INDEX - 0
	PURPOSE:	To specify transportation special handling requirements and hazardous materials information
	SYNTAX NOTES:	1. At least one of TD401 or TD404 must be present. 2. If TD402 is present, then TD403 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
CONDITIONAL	TD401	152	SPECIAL HANDLING CODE Code specifying special transportation handling instructions. - Environmental Control Limits	C ID 2/3
OPTIONAL	TD402	208	HAZARDOUS MATERIAL CODE QUALIFIER Code which qualifies the hazardous material class code (209).	O ID 1/1
CONDITIONAL	TD403	209	HAZARDOUS MATERIAL CLASS Code specifying the kind of hazard for a material.	C ID 2/4
CONDITIONAL	TD404	352	DESCRIPTION A free-form description to clarify the related data elements and their content.	C AN 1/80

	SEGMENT:	REF – REFERENCE NUMBERS
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
200	MAX USE:	200
	LOOP:	HL
	PURPOSE:	To specify identifying numbers.
	SYNTAX NOTES:	1. Either REF02 or REF03 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Code "BL" is for the GBL. Code "BM" is for the commercial bill of lading number. B. When code "TG" is used, also use code – in segment – to indicate that a TCN is assigned to each line item.	REF01	128	REFERENCE NUMBER QUALIFIER Code qualifying the reference number. BL Government Bill of Lading BM Bill of Lading Number MA Ship Notice/Manifest Number SI Shipper's Identifying Number for Shipment (SID) TG Transportation Control Number (TCN) – Overflow, Additional , or Supplementary Number – Terminal Release Order Number – MIPR Number – AERNO Number	M ID 2/2
CONDITIONAL	REF02	127	REFERENCE NUMBER Reference number or identification number as defined for a particular transaction set, or as specified by the reference number qualifier.	C AN 1/30
CONDITIONAL	REF03	352	DESCRIPTION A free-form description to clarify the related data elements and their content	C AN 1/80

	SEGMENT:	MAN – MARKS AND NUMBERS
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
10	MAX USE:	10
	LOOP:	HL
	PURPOSE:	To indicate identifying marks and numbers for shipping containers.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	MAN01	88	MARKS AND NUMBERS QUALIFIER Code specifying the application or source of marks and numbers (87).	M ID 1/2
MANDATORY NOTE: A. Use to carry additional "mark for" data that cannot be carried in the N1-N4 segments.	MAN02	87	MARKS AND NUMBERS Marks and numbers used to identify a shipment or parts of a shipment.	M AN 1/45

NOTE: A. The DoD prefers to generate addresses from codes. The commercial application may require both codes and "in-the-clear" addresses. If a contractor does not know a code, contact the appropriate Government representative.

SEGMENT:	N1 - NAME LEVEL: DETAIL
Optional REQ. DES.:	Optional
1 MAX USE:	1
LOOP:	N1/200
PURPOSE:	To identify a party by type of organization, name, and code.
SYNTAX NOTES:	See ANSI standards.
COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Code "SF" will be used only when different from the address of the Prime Contractor, code "PG". Use code "SF" when: performance of service/items do not require delivery of items upon completion of services; delivery covers performance at multiple locations. If same as Prime Contractor, do not transmit the segment. B. Use code "33" Mark For, only when different than the "Ship To" address. Segments N2 - N4 will only be used to expand on other information. The "MAN" segment may also be used as augmentation for additional "Mark For" information.	N101	98	ENTITY ID CODE Code Identifying an organizational entity or a physical location. - Administered By 33 Mark For PG Prime Contractor PN Party to Receive Shipment Notice PR Payer (Payment By) SF Ship From ST Ship To	M ID 2/2
CONDITIONAL	N102	93	FREE-FORM NAME	C AN 1/35
CONDITIONAL NOTE(s): A When N101 is a DoD activity, use code 10 When N101 is a contractor or other activity, use appropriate code.	N103	66	ID CODE QUALIFIER Code identifying the system/method of code structure used for identification code (67) 10 Department of Defense Activity Address Code (DODAAC) 33 Commercial and Government Entity (CAGE) - Military Assistance Program Address Code (MAPAC) - Receiver's Code	C ID 1/2
CONDITIONAL	N104	67	ID CODE Code identifying a party	C ID 2/17

SEGMENT: N2 - ADDITIONAL NAME INFORMATION
LEVEL: Detail
Optional REQ.DES.: Optional
2 MAX USE: 2
LOOP: N1
PURPOSE: To specify additional names or those longer than 35 characters in length.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	N201	93	NAME Free-form name.	M AN 1/35
OPTIONAL	N202	93	NAME Free-form name.	O AN 1/35

	SEGMENT:	N3 – ADDRESS INFORMATION
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
2	MAX USE:	2
	LOOP:	N1
	PURPOSE:	To specify the location of the named party.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	N301	166	ADDRESS Address information.	M AN 1/35
OPTIONAL	N302	166	ADDRESS Address information.	O AN 1/35

NOTE(S): A. The DoD uses DoD Manual 5000.12-M to specify codes.

Optional
1

SEGMENT: N4 – GEOGRAPHIC LOCATION
LEVEL: Detail
REQ.DES.: Optional
MAX USE: 1
LOOP: N1
PURPOSE: To specify the geographic place of the named party.

SYNTAX NOTES:
1. At least one of N401 or N405 must be present.
2. If N401 is present, then N402 is required.
3. If either N405 or N406 is present, then the other is required.

COMMENTS:
A. A combination of either N401 through N404 (or N405 and N406) may be adequate to specify a location.
B. N402 is required only if city name (N401) is in the USA or Canada.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
CONDITIONAL	N401	19	CITY NAME Free-form text for city name.	C AN 2/19
CONDITIONAL	N402	156	STATE/PROVINCE CODE Code (standard State/Province) if defined by appropriate governmental agency, otherwise use 99.	C ID 2/2
OPTIONAL	N403	116	POSTAL CODE Code defining international postal zone code excluding punctuation and blanks (zip code for United States)	O ID 4/9
OPTIONAL	N404	26	COUNTRY CODE Code identifying the country	O ID 2/2
OPTIONAL	N405	309	LOCATION QUALIFIER Code identifying type of location	O ID 1/2
CONDITIONAL	N406	310	LOCATION IDENTIFIER Code which identifies a specific location.	C AN 1/25

	SEGMENT:	PER - ADMINISTRATIVE COMMUNICATIONS CONTRACT
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	3
	LOOP:	N1
	PURPOSE:	To identify a person or office to whom administrative communications should be directed.
	SYNTAX NOTES:	If PER03 is present, then PER04 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	PER01	366	CONTACT FUNCTION CODE Code identifying the major duty or responsibility of the person or group named. IC Information Contact	M ID 2/2
OPTIONAL	PER02	93	NAME Free-form name.	O AN 1/35
OPTIONAL	PER03	365	COMMUNICATION NUMBER QUALIFIER Code identifying the type of communications number. AU AUTOVON – Defense Data Network (DDN) EM Electronic Mail FT Federal Telecommunications System (FTS) FX Facsimile IT International Telephone PS Packet Switching TE Telephone TL Telex TM Telemail TX TWX	O ID 2/2
CONDITIONAL	PER04	364	COMMUNICATION NUMBER Complete communications number including country or area code when applicable.	C AN 7/21

	SEGMENT:	FOB – F.O.B. RELATED INSTRUCTIONS LEVEL: Header
Optional	REQ.DES:	Optional
1	MAX USE.:	1
	LOOP:	ID – 0100 INDEX – 0
	PURPOSE:	To specify transportation instructions relating to shipment.
	SYNTAX NOTES:	See ANSI standards.
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	FOB01	146	SHIPMENT METHOD OF PAYMENT Code identifying payment terms for transportation charges. DF Defined by the buyer and seller.	M ID 2/2
CONDITIONAL NOTE: A. Code "OR" Origin equates to DFARS code "S", and code "DE" Destination equates to DFARS code "D".	FOB02	309	LOCATION QUALIFIER Code identifying type of location. DE Destination – Other OR Origin PP Pool Point	C ID 1/2
OPTIONAL	FOB03	352	DESCRIPTION A free-form description to clarify the related data elements and their content.	O AN 1/80
NOT USED	FOB04 through FOB09			

NOTE: This segment is used when drop-shipments apply.

Optional
50

SEGMENT: SDQ – DESTINATION QUANTITY
LEVEL: Detail
REQ.DES.: Optional
MAX USE: 50
LOOP: HL
PURPOSE: To specify destination and quantity detail.

SYNTAX NOTES: See ANSI standards.

COMMENTS: See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	SDQ01	355	UNIT OF MEASURE CODE Code identifying the Basic Unit of Measurement.	M ID 2/2
OPTIONAL	SDQ02	66	ID CODE QUALIFIER Code designating the system/method of code structure used for Identification Code (67).	O ID 1/2
MANDATORY	SDQ03	67	ID CODE Code identifying a party.	M ID 2/17
MANDATORY NOTE: A. Quantity shipped. Use SDQ05 through SDQ31 as necessary	SDQ04	380	QUANTITY Numeric value of quantity.	M R 1/10

	SEGMENT:	ITA – ALLOWANCE, CHARGE, OR SERVICE
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	10
	LOOP:	HL
	PURPOSE:	To specify allowance, charges, or services.
	SYNTAX NOTES:	See ANSI standard.
	COMMENTS:	See ANSI standard.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	ITA01	248	ALLOWANCE/CHARGE INDICATOR Code which indicates an allowance or charge for the service specified. N No Allowance or Charge	M ID 1/1
NOT USED	ITA02			
CONDITIONAL NOTE: A. This data element describes the acceptance point. When code "IM" is used, acceptance is at destination. When code "IO" is used, acceptance is at origin.	ITA03	560	SPECIAL SERVICE CODE Code identifying the special service. IM Inspection at Destination IO Inspection at Origin	C ID 2/10
MANDATORY	ITA04	331	METHOD OF HANDLING CODE Code indicating method of handling for an allowance or charge. 07 Optional	M ID 2/2
NOT USED	ITA05 through ITA14			

Here an "AMT" segment needs to be added to allow for the transmission of the total amount, when the transmission of that is required by DoD policy.

The new segment might be added as follows:

	SEGMENT:	AMT – MONETARY AMOUNT
	LEVEL:	Summary
Optional	REQ.DES.:	Optional
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the total monetary amount.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	AMT01	522	AMOUNT QUALIFIER CODE Code to qualify amount. TT Total Transaction Amount.	M ID 1/2
MANDATORY	AMT02	782	MONETARY AMOUNT Monetary amount.	M R 1/15

	SEGMENT:	CTT – TRANSACTION TOTALS
	LEVEL:	Summary
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To transmit a hash total for a specific element in the transaction set.
	SYNTAX NOTES:	See ANSI standards.
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. Total number of "HL" segments.	CTT01	354	NUMBER OF LINE ITEMS Total number line items in the transaction.	M NO 1/6
OPTIONAL NOTE: A. Hash total of data element SN102.	CTT02	347	HASH TOTAL Sum of values of the specified data element. All values in the data element will be summed without regard to decimal points (explicit or implicit) or signs. Truncation will occur on the leftmost digits if the sum is greater than the maximum size of the hash total of the data element.	O R 1/10
NOT USED	CTT03 through CTT07			

	SEGMENT:	SE – TRANSACTION SET TRAILER
	LEVEL:	Summary
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the end of a transaction set and to provide the count of the transmitted segments [including the beginning (ST) and ending (SE) segments].
	COMMENTS:	A. SE is the last segment of each Transaction Set.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	SE01	96	NUMBER OF INCLUDED SEGMENTS Total number of segments in the transaction set including the ST and SE segments.	M NO 1/6
MANDATORY	SE02	329	TRANSACTION SET CONTROL NUMBER Identifying control number assigned by the originator for a transaction set.	M AN 4/9

861 Receiving Advice

FUNCTIONAL GROUP ID = RC

This standard provides the format and establishes the data contents of a receiving advice transaction set. The receiving advice transaction set provides for customary and established business and industry practice relative to the notification of receipt of goods and services.

Table 1

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	ST	Transaction Set Header	M	1			
020	BRA	Beginning Segment for Receiving Advice	M	1			
030	NTE	Note/Special Instruction	F	100			
040	CUR	Currency	O	1			
050	REF	Reference Numbers	O	12			
060	PER	Administrative Communications Contact	O	3			
070	DTM	Date/Time Reference	M	10			
080	PRF	Purchase Order Reference	O	25			
090	TD1	Carrier Details (Quantity and Weight)	O	2			
100	TD5	Carrier Details (Routing Sequence/Transit Time)	O	12			
110	TD3	Carrier Details (Equipment)	O	12			
120	TD4	Carrier Details (Special Handling/Hazardous Materials)	O	5			
130	N1	Name	O	1	N1/200		
140	N2	Additional Name Information	O	2			
150	N3	Address Information	O	2			
160	N4	Geographic Location	O	1			
170	REF	Reference Numbers	O	100			
180	PER	Administrative Communications Contact	O	3			
190	FOB	F.O.B. Related Instructions	O	1			

Table 2

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	RCD	Receiving Conditions	O	1	RCD/200000		
020	SN1	Item Detail (Shipment)	O	1			
030	CUR	Currency	O	1			
040	LIN	Item Identification	O	100			
050	PID	Product/Item Description	O	1000			
060	SLN	Subline Item Detail	O	1	SLN/100		
070	PID	Product/Item Description	O	1000			
080	PO4	Item Physical Details	O	100			
090	REF	Reference Numbers	O	12			
100	PER	Administrative Communications Contact	O	3			
110	DTM	Date/Time Reference	O	10			
120	PRF	Purchase Order Reference	O	25			
130	MEA	Measurements	O	40			
140	FOB	F.O.B. Related Instructions	O	1			
150	N1	Name	O	1	N1/200		
160	N2	Additional Name Information	O	2			

170	N3	Address Information	O	2
180	N4	Geographic Location	O	1
190	REF	Reference Numbers	O	100
200	PER	Administrative Communications Contact	O	3
210	FOB	F.O.B. Related Instructions	O	1
220	TD1	Carrier Details (Quantity and Weight)	O	20
230	TD5	Carrier Details (Routing Sequence/Transit Time)	O	12
240	TD3	Carrier Details (Equipment)	O	12
250	TD4	Carrier Details (Special Handling/Hazardous Materials)	O	5
260	ITA	Allowance, Charge or Service	O	10
270	MAN	Marks and Numbers	O	10

Table 3

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	CTT	Transaction Totals	O	1			Note 1
020	SE	Transaction Set Trailer	M	1			

Note 1: The number of line items (CTT01) is the accumulation of the number of RCD segments. If used, hash total (CTT02) is the sum of the value of quantities received (RCD02) for each RCD segment.

	SEGMENT:	ST – TRANSACTION SET HEADER
	LEVEL:	Header
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the start of a transaction set and to assign a control number.
	COMMENTS:	A. The transaction set identifier (ST01) is intended for use by the translation routines of the interchange partners to select the appropriate transaction set definition.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	ST01	143	TRANSACTION SET ID CODE Code uniquely identifying a transaction set. 861 Receiving Advice	M ID 3/3
MANDATORY	ST02	329	TRANSACTION SET CONTROL NUMBER Identifying control number assigned by the originator for a transaction set.	M AN 4/9

	SEGMENT:	BRA – BEGINNING SEGMENT FOR RECEIVING ADVICE
	LEVEL:	Header
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the beginning of a receiving advice transaction set and to transmit an identifying number and date.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE(s): A. BRA01 is the shipper's identification number (SID).	BRA01	127	REFERENCE NUMBER Reference number or identification number as defined for a particular transaction set, or as specified by the reference number qualifier.	M AN 1/30
MANDATORY NOTE(s): A. Date received as prescribed in block 22 of the DD Form 250.	BRA02	373	DATE Date (YYMMDD)	M DT 6/6
MANDATORY	BRA03	353	TRANSACTION SET PURPOSE CODE Code identifying purpose of transaction set. 00 Original 01 Cancellation 13 Request (Reply to a Previous Request) 14 Advance Notification (Interim Reply) 18 Reissue (Corrected Transaction)	M ID 2/2
MANDATORY	BRA04	962	RECEIVING ADVICE TYPE CODE Code specifying type of receiving advice. - Authorized Government Representative in Receipt of an Acceptance Alert - Authorized Government Representative Not in Receipt of an Acceptance Alert	M ID 1/1

	SEGMENT:	NTE – NOTE/SPECIAL INSTRUCTION
	LEVEL:	Header
Optional	REQ.DES.:	Floating
100	MAX USE:	100
	LOOP:	0
	PURPOSE:	To transmit information in a free-form format, if necessary, for comment or special instruction.
	COMMENTS:	A. The NTE segment permits free-form information/data which, under ANSI X12 standard implementations, is not machine processable. The use of the "NTE" segment should therefore be avoided, if at all possible, in an automated environment.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL	NTE01	363	NOTE REFERENCE CODE Code identifying the functional area or purpose for which the note applies. REV Receivables	O ID 3/3
OPTIONAL NOTE(s): A. Use when needed to comply with the "except as noted" requirement in block 22 of the DD Form 250.	NTE02	3	FREE-FORM MESSAGE Free-form text.	M AN 1/60

	SEGMENT:	REF – REFERENCE NUMBERS
	LEVEL:	Header
Optional	REQ.DES.:	Optional
3	MAX USE:	12
	LOOP:	0
	PURPOSE:	To specify identifying numbers.
	SYNTAX NOTES:	1. Either REF02 or REF03 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	REF01	128	REFERENCE NUMBER QUALIFIER Code qualifying the reference number. BL Government Bill of Lading BM Bill of Lading Number TG Transportation Control Number (TCN)	M ID 2/2
CONDITIONAL	REF02	127	REFERENCE NUMBER Reference number or identification number as defined for a particular transaction set, or as specified by the reference number qualifier.	C AN 1/30
NOT USED	REF03	352	DESCRIPTION	C AN 1/80

	SEGMENT:	PER – ADMINISTRATIVE COMMUNICATIONS CONTACT
	LEVEL:	Header
Optional	REQ.DES.:	Optional
1	MAX USE:	3
	LOOP:	0
	PURPOSE:	To identify a person or office to whom administrative communications should be directed.
	SYNTAX NOTES:	1. If PER03 is present, then PER04 is required.

DATA ELEMENT SUMMARY

	REF. DES	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	PER01	366	CONTACT FUNCTION CODE Code identifying the major duty or responsibility of the person or group named. IC Information Contact	M ID 2/2
OPTIONAL	PER02	93	NAME Free-form name	O AN 1/35
OPTIONAL	PER03	365	COMMUNICATION NUMBER QUALIFIER Code identifying the type of communication number AU AUTOVON – Defense Data Network (DDN) EM Electronic Mail FT Federal Telecommunications System (FTS) FX Facsimile IT International Telephone PS Packet Switching TE Telephone TL Telex TM Telemail TX TWX	O ID 2/2
CONDITIONAL	PER04	364	COMMUNICATION NUMBER Complete communications number including country or area code when applicable	C AN 7/21

	SEGMENT:	DTM – DATE/TIME REFERENCE
	LEVEL:	Header
Mandatory	REQ.DES.:	Optional
5	MAX USE:	10
	LOOP:	0
	PURPOSE:	To specify pertinent dates and times.

SYNTAX NOTES: 1. At least one of DTM02 or DTM03 must be present.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	DTM01	374	DATE/TIME QUALIFIER Code specifying type of date or time, or both date and time. 035 Delivered 097 Transaction Creation 134 Ready for Inspection (Date Offered) - Actual Acceptance Date - Estimated Acceptance Date	M ID 3/3
CONDITIONAL	DTM02	373	DATE Date (YYMMDD)	C DT 6/6
NOT USED	DTM03	337	TIME	C TM 4/4
NOT USED	DTM04	623	TIME CODE	O ID 2/2

	SEGMENT:	PRF – PURCHASE ORDER REFERENCE
	LEVEL:	Header
Optional	REQ.DES.:	Optional
25	MAX USE:	25
	LOOP:	0
	PURPOSE:	To provide reference to a specific purchase order.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	PRF01	324	PURCHASE ORDER NUMBER Identifying number for purchase order assigned by the orderer/purchaser.	M AN 1/22
OPTIONAL NOTE: A. This is the call/order number.	PRF02	328	RELEASE NUMBER Number identifying a release against a purchase order previously placed by the parties involved in the transaction.	O AN 1/30
OPTIONAL NOTE(s): A. This is the modification number.	PRF03	327	CHANGE ORDER SEQUENCE NUMBER Number assigned by the orderer identifying a specific change or revision to a previously transmitted transaction set.	O AN 1/8
NOT USED	PRF04	323	PURCHASE ORDER DATE	O DT 6/6
NOT USED	PRF05	350	ASSIGNED IDENTIFICATION	O AN 1/6
OPTIONAL	PRF06	367	CONTRACT NUMBER Contract number.	O AN 1/30

	SEGMENT:	N1 - NAME
	LEVEL:	Header
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	N1/200
	PURPOSE:	To identify a party by type of organization, name, and code.

SYNTAX NOTES:
1. At least one of N102 or N103 must be present.
2. If either N103 or N104 is present, then the other is required.

COMMENTS:
A. This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency, the "ID CODE" (N104) must provide a key to the table maintained by the transaction processing party.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	N101	98	ENTITY CODE Code identifying an organizational entity or a physical location. PG Prime Contractor PN Party to Receive Notice ST Ship To - Contract Administration ADP Point	M ID 2/2
CONDITIONAL	N102	93	NAME Free-form name.	C AN 1/35
CONDITIONAL	N103	66	ID CODE QUALIFIER Code identifying the system/method of code structure used for identification code (67). 10 Department of Defense Activity Address Code (DODAAC) - Military Assistance Program Address Code (MAPAC) 33 Commercial and Government Entity (CAGE)	C ID 1/2
CONDITIONAL	N104	67	ID CODE Code identifying a party.	C ID 2/17

	SEGMENT:	N2 – ADDITIONAL NAME INFORMATION
	LEVEL:	Header
Optional	REQ.DES.:	Optional
2	MAX USE:	2
	LOOP:	N1
	PURPOSE:	To specify additional names or those longer than 35 characters in length.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	N201	93	NAME Free-form name.	M AN 1/35
OPTIONAL	N202	93	NAME Free-form name.	O AN 1/35

	SEGMENT:	N3 - ADDRESS INFORMATION
	LEVEL:	Header
Optional	REQ.DES.:	Optional
2	MAX USE:	2
	LOOP:	N1
	PURPOSE:	To specify the location of the named party.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	N301	166	ADDRESS Address information.	M AN 1/35
OPTIONAL	N302	166	ADDRESS Address information.	O AN 1/35

NOTE(s): A. The DoD uses DoD Manual 5000.12-M to specify codes.

Optional
1

SEGMENT: N4 – GEOGRAPHIC LOCATION
LEVEL: Header
REQ.DES.: Optional
MAX USE: 1
LOOP: N1
PURPOSE: To specify the geographic place of the named party.

SYNTAX NOTES:
1. At least one of N401 or N405 must be present.
2. If N401 is present, then N402 is required.
3. If either N405 or N406 is present, then the other is required.

COMMENTS:
A. A combination of either N401 through N404 (or N405 and N406) may be adequate to specify a location.
B. N402 is required only if city name (N401) is in the USA or Canada.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
CONDITIONAL	N401	19	CITY NAME Free-form text for city name.	C AN 2/19
CONDITIONAL	N402	156	STATE/PROVINCE CODE Code (standard State/Province) if defined by appropriate governmental agency, otherwise use 99.	C ID 2/2
OPTIONAL	N403	116	POSTAL CODE Code defining international postal zone code excluding punctuation and blanks (zip code for United States).	O ID 4/9
OPTIONAL	N404	26	COUNTRY CODE Code identifying the country.	O ID 2/2
OPTIONAL	N405	309	LOCATION QUALIFIER Code identifying type of location.	O ID 1/2
CONDITIONAL	N406	310	LOCATION IDENTIFIER Code which identifies a specific location.	C AN 1/25

NOTE(s): A. RCD01-03 will be used once for each CLIN received which is discrepant.

Optional
1

SEGMENT: RCD – RECEIVING CONDITIONS
LEVEL: Detail
REQ.DES.: Optional
MAX USE: 1
LOOP: RCD/200000
PURPOSE: To report receiving conditions and specify contested quantities.

SYNTAX NOTES:
1. At least one of RCD02, RCD04, or RCD06 must be present.
2. If RCD02 is present, then RCD03 is required.
3 – 8. Other syntax notes are not applicable.

COMMENTS:
A. See the data dictionary for a complete list of receiving condition IDs.
B. RCD01 is the receiving advice line-item identification.
C. RCD06 through RCD20 provide for five different quantities whose condition upon receipt is under question.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
OPTIONAL NOTE(s): A. RCD01 carries the CLIN.	RCD01	350	ASSIGNED IDENTIFICATION Alphanumeric characters assigned for differentiation within a transaction set.	O	AN	1/6
CONDITIONAL	RCD02	663	QUANTITY OF UNITS RECEIVED Number of units received.	C	R	1/9
CONDITIONAL NOTE(s): A. DoD uses DoD Manual 5000.12-M	RCD03	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement.	C	ID	2/2
NOT USED	RCD04 through RCD05					
CONDITIONAL	RCD06	667	QUANTITY IN QUESTION Number of units contested because of physical condition or status of units.	C	R	1/9
CONDITIONAL	RCD07	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement.	C	ID	2/2

CONDITIONAL	RCD08	412	RECEIVING CONDITION CODE Code designating physical condition or status of units received in a specific shipment. 01 Damaged Product or Container 02 Quantity Short 03 Quantity Over 04 Quality Problem 05 Incorrect Product 07 Good Condition – Condition of Documentation Precludes Acceptance – Shipment Number Missing or Incomplete, But Does Not Preclude Acceptance – Misdirected – Inadequate Technical Data – Undelivered	C	ID	2/2

Data elements RCD09 through RCD20 are used as required.

	SEGMENT:	SN1 – ITEM DETAIL (SHIPMENT)
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	1
	LOOP:	RCD
	PURPOSE:	To specify line-item detail relative to shipment.
	SYNTAX NOTES:	See ANSI standards.
	COMMENTS:	See ANSI standards.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL	SN101	350	ASSIGNED IDENTIFICATION Alphanumeric characters assigned for differentiation within a transaction set.	O AN 1/6
MANDATORY	SN102	382	NUMBER OF UNITS SHIPPED Numeric value of units shipped in manufacturer's shipping units for a line-item or transaction set.	M R 1/10
MANDATORY NOTE (s): A. DoD uses DoD Manual 5000.12-M.	SN103	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement.	M ID 2/2
NOT USED	SN104 through SN108			

	SEGMENT:	LIN – ITEM IDENTIFICATION
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
100	MAX USE:	100
	LOOP:	RCD
	PURPOSE:	To specify basic item identification data.

SYNTAX NOTES: 1. If LIN04 is present, then LIN05 is required.
2 – 14. If LIN (even number) is present, then LIN (odd number) is required.

COMMENTS: A. See the data dictionary for a complete list of IDs.
B. LIN01 is the line-item identification.
C. LIN02 through LIN31 provide for 15 different product/service IDs for each item.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL NOTE(s): A. LIN01 is the contract ELIN, or SUBCLIN/ELIN.	LIN01	350	ASSIGNED IDENTIFICATION Alphanumeric characters assigned for differentiation within a transaction set.	O AN 1/6
MANDATORY	LIN02	235	PRODUCT/SERVICE IDENTIFICATION QUALIFIER Code identifying the type/source of the descriptive number used in product/service ID (234). CN Commodity Name FS Federal Stock Classification and/or National Stock Number PN Company Part Number	M ID 2/2
MANDATORY	LIN03	234	PRODUCT/SERVICE IDENTIFICATION Identifying number for a product or service.	M AN 1/30
NOT USED	LIN04 through LIN31			

	SEGMENT:	CTT – TRANSACTION TOTALS
	LEVEL:	Summary
Optional	REQ.DES.:	Optional
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To transmit a hash total for a specific element in the transaction set.

SYNTAX NOTES:
1. If CTT03 is present, then CTT04 is required.
2. If CTT05 is present, then CTT06 is required.

COMMENTS:
A. This segment is intended to provide hash totals to validate transaction completeness and correctness.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE: A. CTT01 is the accumulation of the number of "RCD" segments.	CTT01	354	NUMBER OF LINE ITEMS Total number of line items in the transaction set.	M NO 1/6
NOT USED	CTT02 through CTT07			

	SEGMENT:	SE - TRANSACTION SET TRAILER
	LEVEL:	Summary
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments).
	COMMENTS:	SE is the last segment of each transaction set.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	SE01	96	NUMBER OF INCLUDED SEGMENTS Total number of segments included in a transaction set including ST and SE segments.	M NO 1/6
MANDATORY NOTE(s): A. This is the same number as appears in ST02.	SE02	329	TRANSACTION SET CONTROL NUMBER Identifying control number assigned by the originator for a transaction set.	M AN 4/9

863 Report of Test Results

FUNCTIONAL GROUP ID = RT

This standard provides the format and establishes the data contents of a report of test results transaction set. This transaction set can be used to transmit the results of tests performed to satisfy a specified product or process requirement. This includes, but is not limited to, test data such as inspection data, certification data, and statistical process control measurements.

Table 1

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	ST	Transaction Set Header	M	1			
020	BTR	Beginning Segment for Test Results	M	1			
030	NTE	Note/Special Instruction	F	100			
040	REF	Reference Numbers	O	12			
050	DTM	Date/Time Reference	O	10			
060	PID	Product/Item Description	O	200			
070	MEA	Measurements	O	20			
080	N1	Name	O	1	N1/>1		
090	N2	Additional Name Information	O	2			
100	N3	Address Information	O	2			
110	N4	Geographic Location	O	1			
120	REF	Reference Numbers	O	12			
130	PER	Administrative Communications Contact	O	3			

Table 2

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	LIN	Item Identification	O	1	LIN/>1	416389	
020	PID	Product/Item Description	O	1000		416389	
030	MEA	Measurements	O	20		416389	
031	PSD	Physical Sample Description	O	>1		416389	
032	SPS	Sampling Parameters for Summary Statistics	O	1		416389	
040	DTM	Date/Time Reference	O	10		416389	
050	REF	Reference Numbers	O	1000		416389	
051	N1	Name	O	1	N1/10	416389	
052	N2	Additional Name Information	O	2		416389	
053	N3	Address Information	O	2		416389	
054	N4	Geographic Location	O	1		416389	
055	REF	Reference Numbers	O	10		416389	
056	PER	Administrative Communications Contact	O	3		416389	
060	CID	Characteristic/Class ID	M	1	CID/>1	416389	
070	UIT	Unit Detail	O	1		416389	
080	PSD	Physical Sample Description	O	>1		416389	
100	SPS	Sampling Parameters for Summary Statistics	O	1		416389	
120	DTM	Date/Time Reference	O	10		416389	
130	REF	Reference Numbers	O	10		416389	
150	MEA	Measurements	O	1	MEA/>1	416389	
160	DTM	Date/Time Reference	O	10		416389	

170	REF	Reference Numbers	O	10			416389
180	STA	Statistics	O	1	STA>1		416389
190	DTM	Date/Time Reference	O	10			416389
200	REF	Reference Numbers	O	10			416389
201	TMD	Test Method	O	1	TMD/100		416389
202	MEA	Measurements	O	10			416389
203	DTM	Date/Time Reference	O	10			416389
204	REF	Reference Numbers	O	10			416389

Table 3

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	SE	Transaction Set Trailer	M	1			

	SEGMENT:	ST – TRANSACTION SET HEADER
	LEVEL:	Header
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the start of a transaction set and to assign a control number.
	COMMENTS:	A. The transaction set identifier (ST01) is intended for use by the translation routines of the interchange partners to select the appropriate transaction set definition.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	ST01	143	TRANSACTION SET ID CODE Code uniquely identifying a transaction set. 863 Report of Test Results	M ID 3/3
MANDATORY	ST02	329	TRANSACTION SET CONTROL NUMBER Identifying control number assigned by the originator for a transaction set.	M AN 4/9

	SEGMENT	BTR – BEGINNING SEGMENT FOR TEST RESULTS
	LEVEL:	Header
Mandatory	REQ DES .	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the beginning of a test results transaction set.

COMMENTS:
A. If BTR01 equals 01, 02, 03, 04, 05, 18, or 19, then BTR06 is required to identify the original test report reference number transmitted.
B. BTR02 is the date this transaction set was created by the sending party.
C. BTR03 is the time that this transaction set was created by the sending party.
D. BTR05 specifies test results report reference number created by the sending party.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE(s): A. Use code 06 when results were acceptable B. Use code 12 when results were not acceptable.	BTR01	353	TRANSACTION SET PURPOSE CODE Code identifying the purpose of a transaction set. 06 Confirmation 12 Not Processed	M ID 2/2
MANDATORY	BTR02	373	DATE Date (YYMMDD)	M DT 6/6
NOT USED	BTR03	337	TIME	O TM 4/4
REQUIRED	BTR04	755	REPORT TYPE CODE – Origin Inspection – Origin Acceptance – Origin Inspection and Acceptance – Destination Inspection – Destination Acceptance – Destination Inspection and Acceptance	O ID 2/2
NOT USED	BTR05	127	REFERENCE NUMBER	O AN 1/30
NOT USED	BTR06	127	REFERENCE NUMBER	O AN 1/30

	SEGMENT:	NTE – NOTE/SPECIAL INSTRUCTION
	LEVEL:	Header
Optional	REQ.DES.:	Floating
100	MAX USE:	100
	LOOP:	0
	PURPOSE:	To transmit information in a free-form format, if necessary, for comment or special instruction.
	COMMENTS:	A. The NTE segment permits free-form information/data which, under ANSI X12 standard implementations, is not machine processable. The use of the "NTE" segment should therefore be avoided, if at all possible, in an automated environment.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL	NTE01	363	NOTE REFERENCE CODE Code identifying the functional area or purpose for which the note applies. GEN Entire Transaction Set	O ID 3/3
MANDATORY NOTE(s): A. Use when needed to comply with the "except as noted" requirement in block 21 of the DD Form 250.	NTE02	3	FREE-FORM MESSAGE Free-form text.	M AN 1/60

	SEGMENT:	REF – REFERENCE NUMBERS
	LEVEL:	Header
Optional	REQ.DES.:	Optional
5	MAX USE:	12
	LOOP:	0
	PURPOSE:	To specify identifying numbers.
	SYNTAX NOTES:	1. Either REF02 or REF03 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	REF01	128	REFERENCE NUMBER QUALIFIER Code qualifying the reference number. 9L Government Bill of Lading Number CO Customer Order Number CT Contract Number SI Shipper's Identifying Number for Shipment (SID) TG Transportation Control Number (TCN)	M ID 2/2
CONDITIONAL	REF02	127	REFERENCE NUMBER Reference number or identification number as defined for a particular transaction set, or as specified by the reference number qualifier.	C AN 1/30
NOT USED	REF03	352	DESCRIPTION	C AN 1/80

NOTE(s): A. Use code "011" only when date shipped has been provided.

Optional
2

SEGMENT: DTM – DATE/TIME REFERENCE
LEVEL: Header
REQ.DES.: Optional
MAX USE: 10
LOOP: 0
PURPOSE: To specify pertinent dates and times.

SYNTAX NOTES: 1. At least one of DTM02 or DTM03 must be present.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	DTM01	374	DATE/TIME QUALIFIER Code specifying type of date or time, or both date and time. 011 Shipped 097 Transaction Creation	M ID 3/3
CONDITIONAL	DTM02	373	DATE Date (YYMMDD)	C DT 6/6
NOT USED	DTM03	337	TIME	C TM 4/4
NOT USED	DTM04	623	TIME CODE	O ID 2/2

	SEGMENT:	N1 – NAME
	LEVEL:	Header
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	N1/>1
	PURPOSE:	To identify a party by type of organization, name, and code.

SYNTAX NOTES:
1. At least one of N102 or N103 must be present.
2. If either N103 or N104 is present, then the other is required.

COMMENTS:
A. This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency, the "ID CODE" (N104) must provide a key to the table maintained by the transaction processing party.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	N101	98	ENTITY ID CODE Code identifying an organizational entity or a physical location. – Administered By PA Party to Receive Inspection Report PG Prime Contractor ST Ship To	M ID 2/2
CONDITIONAL	N102	93	NAME Free-form name.	C AN 1/35
CONDITIONAL NOTE(s): A. When N101 is a government activity, use code 10. When N101 is other than a government activity, use appropriate code	N103	66	ID CODE QUALIFIER Code identifying the system/method of code structure used for identification code (67). 10 Department of Defense Activity Address Code (DODAAC) – Military Assistance Program Address Code (MAPAC) 33 Commercial and Government Entity (CAGE)	C ID 1/2
CONDITIONAL	N104	67	ID CODE Code identifying a party	C ID 2/17

	SEGMENT:	N2 – ADDITIONAL NAME INFORMATION
	LEVEL:	Header
Optional	REQ.DES.:	Optional
2	MAX USE:	2
	LOOP:	N1
	PURPOSE:	To specify additional names or those longer than 35 characters in length.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	N201	93	NAME Free-form name.	M AN 1/35
OPTIONAL	N202	93	NAME Free-form name.	O AN 1/35

SEGMENT: N3 – ADDRESS INFORMATION
LEVEL: Header
Optional REQ.DES.: Optional
2 MAX USE: 2
LOOP: N1
PURPOSE: To specify the location of the named party.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	N301	166	ADDRESS Address information.	M AN 1/35
OPTIONAL	N302	166	ADDRESS Address information.	O AN 1/35

NOTE(s): A. The DoD uses DoD Manual 5000.12-M to specify codes.

Optional
1

SEGMENT: N4 - GEOGRAPHIC LOCATION
LEVEL: Header
REQ.DES.: Optional
MAX USE: 1
LOOP: N1
PURPOSE: To specify the geographic place of the named party.

SYNTAX NOTES:
1. At least one of N401 or N405 must be present.
2. If N401 is present, then N402 is required.
3. If either N405 or N406 is present, then the other is required.

COMMENTS:
A. A combination of either N401 through N404 (or N405 and N406) may be adequate to specify a location.
B. N402 is required only if city name (N401) is in the USA or Canada.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
CONDITIONAL	N401	19	CITY NAME Free-form text for city name.	C AN 2/19
CONDITIONAL	N402	156	STATE OR PROVINCE CODE Code (standard State/Province) if defined by appropriate government agency, otherwise use 99.	C ID 2/2
OPTIONAL	N403	116	POSTAL CODE Code defining international postal zone code excluding punctuation and blanks (zip code for United States).	O ID 4/9
OPTIONAL	N404	26	COUNTRY CODE Code identifying the country	O ID 2/2
OPTIONAL	N405	309	LOCATION QUALIFIER Code identifying type of location	O ID 1/2
CONDITIONAL	N406	310	LOCATION IDENTIFIER Code which identifies a specific location	C AN 1/25

	SEGMENT:	PER – ADMINISTRATIVE COMMUNICATIONS CONTACT
	LEVEL:	Header
Optional	REQ.DES.:	Optional
1	MAX USE:	3
	LOOP:	N1
	PURPOSE:	To identify a person or office to whom administrative communications should be directed.
	SYNTAX NOTES:	If PER03 is present, then PER04 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	PER01	366	CONTACT FUNCTION CODE Code identifying the major duty or responsibility of the person or group named. QA Quality Assurance Contact	M ID 2/2
OPTIONAL	PER02	93	NAME Free-form name.	O AN 1/35
OPTIONAL	PER03	365	COMMUNICATION NUMBER QUALIFIER Code identifying the type of communication number. AU AUTOVON – Defense Data Network (DDN) EM Electronic Mail FT Federal Telecommunications System (FTS) FX Facsimile IT International Telephone PS Packet Switching TE Telephone TL Telex TM Telemail TX TWX	O ID 2/2
CONDITIONAL	PER04	364	COMMUNICATION NUMBER Complete communications number including country or area code when applicable	C AN 7/21

	SEGMENT:	LIN – ITEM IDENTIFICATION
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	1
	LOOP:	LIN/>1
	PURPOSE:	To specify basic item identification data.

SYNTAX NOTES:
1. If LIN04 is present, then LIN05 is required.
2 – 14. If LIN (even number) is present, then LIN (odd number) is required.

COMMENTS:
A. See the data dictionary for a complete list of IDs.
B. LIN01 is the line-item identification.
C. LIN02 through LIN31 provide for 15 different product/service IDs for each item.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
OPTIONAL NOTE(s): A. LIN01 is the contract CLIN.	LIN01	350	ASSIGNED IDENTIFICATION Alphanumeric characters assigned for differentiation within a transaction set.	O AN 1/6
MANDATORY	LIN02	235	PRODUCT/SERVICE IDENTIFICATION QUALIFIER Code identifying the type/source of the descriptive number used in product/service ID (234). CN Commodity Name FS Federal Stock Classification and/or National Stock Number PN Company Part Number	M ID 2/2
MANDATORY	LIN03	234	PRODUCT/SERVICE IDENTIFICATION Identifying number for a product or service.	M AN 1/30
LIN04 through LIN31 will be used as appropriate				

	SEGMENT:	CID - CHARACTERISTICS/CLASS ID
-	LEVEL:	Detail
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	CID/>1
	PURPOSE:	To specify the general class or specific characteristic on which test results are being reported.

SYNTAX NOTES:
1. If CID03 or CID04 is used, the other is required.
2. Either CID01 or CID02 or CID04 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
CONDITIONAL	CID01	738	MEASUREMENT QUALIFIER Code identifying the type of measurement.	C ID 1/3
CONDITIONAL	CID02	750	PRODUCT/PROCESS CHARACTERISTIC CODE Code specifying the product or process characteristic being described. 08 Product - Service	C ID 2/3
CONDITIONAL*	CID03	348	ITEM DESCRIPTION QUALIFIER Code identifying agency responsible for the code used.	C ID 2/2
CONDITIONAL	CID04	751	PRODUCT DESCRIPTION CODE A code from an industry code list which provides specific data about a product characteristic.	C ID 1/2
OPTIONAL	CID05	352	DESCRIPTION A free-form description to clarify the related data elements and their content	O AN 1/80

** NOTE: A. Data element 348 to be eliminated.*

	SEGMENT:	UIT - UNIT DETAIL
	LEVEL:	Detail
Optional	REQ.DES.:	Optional
1	MAX USE:	1
	LOOP:	CID
	PURPOSE:	To specify item-unit data.

SYNTAX NOTE: 1. If UIT03 is present, then UIT02 is required.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY NOTE(s): A. The DoD uses DoD Manual 5000.12-M.	UIT01	355	UNIT OF MEASURE CODE Code identifying the basic unit of measurement.	M ID 2/2
NOT USED	UIT02	212	UNIT PRICE	C R 1/14
NOT USED	UIT03	639	BASIC UNIT PRICE CODE	O ID 2/2

	SEGMENT:	SE – TRANSACTION SET TRAILER
	LEVEL:	Summary
Mandatory	REQ.DES.:	Mandatory
1	MAX USE:	1
	LOOP:	0
	PURPOSE:	To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments).
	COMMENTS:	SE is the last segment of each transaction set.

DATA ELEMENT SUMMARY

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
MANDATORY	SE01	96	NUMBER OF INCLUDED SEGMENTS Total number of segments included in a transaction set including ST and SE segments	M NO 1/6
MANDATORY NOTE(s): A. This is the same number as appears in ST02.	SE02	329	TRANSACTION SET CONTROL NUMBER Identifying control number assigned by the originator for a transaction set	M AN 4/9

APPENDIX D

OTHER CANDIDATE STANDARD TRANSACTION SETS

842 Nonconformance Report

FUNCTIONAL GROUP ID = NC

This standard provides the format and establishes the data contents of the Nonconformance Report Transaction Set within the context of an Electronic Data Interchange environment. The purpose of this transaction set is to report products and processes that do not fulfill specifications or requirements.

The Nonconformance Report Transaction Set provides the ability for the sender to report the nonconformance at the level of detail that is required. It also provides the ability to report the specific nonconformances of a component/part while identifying the assembly as the product that is in nonconformance. The Nonconformance Report Transaction Set may be used to report, initiate, or request actions related to the nonconformance being reported.

Table 1

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	ST	Transaction Set Header	M	1		492389	
020	BNR	Beginning Segment For Nonconformance Report	M	1		492389	
030	REF	Reference Numbers	O	>1		492389	
040	DTM	Date/Time Reference	O	>1		492389	
050	PID	Product/Item Description	O	>1		492389	
060	MEA	Measurements	O	1	MEA/>1	492389	
070	DTM	Date/Time Reference	O	>1		492389	
080	REF	Reference Numbers	O	>1		492389	
090	PWK	Paperwork	O	1	PWK/>1	492389	
100	REF	Reference Numbers	O	>1		492389	
110	DTM	Date/Time Reference	O	>1		492389	
120	N1	Name	O	1	N1/>1	492389	
130	N2	Additional Name Information	O	2		492389	
140	N3	Address Information	O	2		492389	
150	N4	Geographic Location	O	1		492389	
160	REF	Reference Numbers	O	12		492389	
170	PER	Administrative Communications Contact	O	3		492389	

Table 2

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	HL	Hierarchical Level	M	1	HL/>1	492389	Note 1
020	LIN	Item Identification	O	1		492389	
030	PID	Product/Item Description	O	>1		492389	
040	PRS	Part Release Status	O	>1		492389	
050	CID	Characteristic/Class ID	O	>1		492389	
060	DTM	Date/Time Reference	O	>1		492389	
070	REF	Reference Numbers	O	>1		492389	
080	QTY	Quantity	O	>1		492389	
090	TMD	Test Method	O	1		492389	

100	PSD	Physical Sample Description	O	1		492389
110	MEA	Measurements	O	1	MEA/>1	492389
120	DTM	Date/Time Reference	O	>1		492389
130	REF	Reference Numbers	O	>1		492389
140	SPS	Sampling Parameters for Summary Statistics	O	1	SPS/>1	492389
150	REF	Reference Numbers	O	>1		492389
160	PSD	Physical Sample Description	O	1		492389
170	MEA	Measurements	O	1	MEA/>1	492389
180	DTM	Date/Time Reference	O	>1		492389
190	REF	Reference Numbers	O	>1		492389
200	STA	Statistics	O	1	STA/>1	492389
210	DTM	Date/Time Reference	O	>1		492389
220	REF	Reference Numbers	O	>1		492389
230	NCD	Nonconformance Description	O	1	NCD/>1	492389
240	NTE	Note/Special Instruction	O	>1		492389
250	DTM	Date/Time Reference	O	>1		492389
260	REF	Reference Numbers	O	>1		492389
270	QTY	Quantity	O	>1		492389
280	N1	Name	O	1	N1/>1	492389
290	N2	Additional Name Information	O	2		492389
300	N3	Address Information	O	2		492389
310	N4	Geographic Location	O	1		492389
320	REF	Reference Numbers	O	>1		492389
330	PER	Administrative Communications Contact	O	>1		492389
340	NCA	Nonconformance Action	O	1	NCA/>1	492389
350	NTE	Note/Special Instruction	O	>1		492389
360	DTM	Date/Time Reference	O	>1		492389
370	REF	Reference Numbers	O	>1		492389
380	PWK	Paperwork	O	1	PWK/>1	492389
390	REF	Reference Numbers	O	>1		492389
400	DTM	Date/Time Reference	O	>1		492389
410	N1	Name	O	1	N1/>1	492389
420	N2	Additional Name Information	O	2		492389
430	N3	Address Information	O	2		492389
440	N4	Geographic Location	O	1		492389
450	REF	Reference Numbers	O	>1		492389
460	PER	Administrative Communications Contact	O	>1		492389
470	SE	Transaction Set Trailer	M	1		492389

Note 1: The only HL levels allowable are item, component, and product characteristic.

857 Shipment and Billing Notice

FUNCTIONAL GROUP ID = BS

This standard provides the format and establishes the data contents of the Shipment and Billing Notice Transaction Set within the context of an Electronic Data Interchange environment. This transaction set is used to provide data to the recipient on a shipment of items for receipt planning and payment generation for the items received in the shipment.

This transaction set is not to be used interchangeably with the Invoice Transaction Set (810), nor is it to be used interchangeably with the Ship Notice/Manifest Transaction Set (856). The business environment where this transaction set can be used is one in which the shipment data, along with terms and item prices, are used to plan receipts and generate payment to the vendor for the items received. It is not to be used where there are separate ship notice and separate invoice transactions, i.e., do not use this transaction set to replace the Ship Notice/Manifest while using a paper invoice or the Invoice Transaction Set.

This transaction set is not to be used by trading partners utilizing a system where payment is based solely on receipts and prices are agreed to up front (Evaluated Receipts Settlement, ERS).

Table 1

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	ST	Transaction Set Header	M	1		388290	
020	BSN	Beginning Segment for Ship Notice	M	1		388290	

Table 2

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
010	HL	Hierarchical Level	M	1	HL/>1	388290	Comment A, Notes 1, 2, 3, 4
020	G05	Total Shipment Information	O	1	BS1/1	388290	Note 5
030	TD1	Carrier Details (Quantity and Weight)	O	5		388290	
040	TD3	Carrier Details (Equipment)	O	5		388290	
050	TD4	Carrier Details (Special Handling/Hazardous Materials)	O	5		388290	
060	TD5	Carrier Details (Routing Sequence/Transit Time)	O	10		388290	
070	FOB	F.O.B. Related Instructions	O	1		388290	
080	DTM	Date/Time Reference	O	5		388290	
090	N9	Reference Number	O	20		388290	
100	PER	Administrative Communications Contact	O	5		388290	
110	CUR	Currency	O	1		388290	
120	N1	Name	O	1	N1/10	388290	

130	N2	Additional Name Information	O	2		388290	
140	N3	Address Information	O	2		388290	
150	N4	Geographic Location	O	1		388290	
160	TDS	Total Monetary Value Summary	O	1	BS2/1	388290	Note 6
170	PRF	Purchase Order Reference	O	1		388290	
180	N9	Reference Number	O	10		388290	
190	DTM	Date/Time Reference	O	10		388290	
200	ITD	Terms of Sale/Deferred Terms of Sale	O	5		388290	
210	TXI	Tax Information	O	10		388290	
220	ITA	Allowance, Charge or Service	O	1	ITA/10	388290	
230	TXI	Tax Information	O	10		388230	
240	N1	Name	O	1	N1/10	388290	
250	N2	Additional Name Information	O	2		388290	
260	N3	Address Information	O	2		388290	
270	N4	Geographic Location	O	1		388290	
280	PAL	Pallet Information	O	1	BS3/1	388290	Note 7
290	MAN	Marks and Numbers	O	10		388290	
300	LX	Assigned Number	O	1	BS4/1	388290	Comment C, Notes 8 & 9
310	PO4	Item Physical Details	O	1		388290	Note 10
320	MEA	Measurements	O	1		388290	
330	PKG	Marking, Packaging, Loading	O	10		388290	
340	MAN	Marks and Numbers	O	10		388290	
350	IT1	Baseline Item Data (Invoice)	M	1	BS5/1	388290	Note 11
360	IT3	Additional Item Data	O	1		388290	
370	PO4	Item Physical Details	O	1		388290	Note 10
380	TD1	Carrier Details (Quantity and Weight)	O	5		388290	Note 12
390	TXI	Tax Information	O	10		388290	
400	CTP	Pricing Information	O	10		388290	
410	N9	Reference Number	O	10		388290	
420	PID	Product/Item Description	O	1	PID/25	388290	
430	MEA	Measurements	O	10		388290	Note 13
440	SLN	Subline Item Detail	O	1	SLN/1000	388290	
450	PID	Product/Item Description	O	25		388290	
460	ITA	Allowance, Charge or Service	O	1	ITA/10	388290	
470	TXI	Tax Information	O	10		388290	

Note 1: The hierarchical levels of the transaction set are Shipment, Order, Tare (pallet), Pack (carton), Subpack, and Item. The levels, when used, must always appear (in the transaction) in the above order, e.g., the pack level cannot be subordinate to the item level; however, the pack level may be omitted.

Note 2: HL01 (Hierarchical ID Number) will be assigned sequentially within the hierarchy starting with one and incremented by one for each HL segment. Numbering is assigned in a top-down/left-right order within the structure.

Note 3: HL02 (Hierarchical Parent ID) will have the value of 0 when used at the Shipment level.

Note 4: HL03 (Hierarchical Level Code) may only contain the codes, S (Shipment Level), O (Order Level), T (Tare Level), P (Pack Level), Q (Subpack Level), and I (Item Level).

Note 5: The BS1 loop may only be used at the Shipment Level.

Note 6: The BS2 loop may only be used at the Order level.

Note 7: The BS3 loop may only be used at the Tare (pallet) level.

Note 8: The BS4 loop may only be used at the Pack (carton) and Subpack levels. The Subpack level may only be used in conjunction with the Pack level.

Note 9: LX01 (Assigned Number) will be sequentially assigned starting with one and incremented by one for each LX segment.

Note 10: Weight and volume in the PO4 segment represent the total weight or volume of the pack, subpack, or item.

Note 11: The BS5 loop may only be used at the Item level.

Note 12: The TD1 segment is only used to provide the commodity code. Only TD102 and TD104 may be used.

Note 13: The MEA segment in the Pack and Subpack levels is only used to specify weight of the contents of the pack/subpack and/or the weight of the pack material, e.g., the weight of the goods in the carton or the weight of the empty carton.

Comment A: The structure of this transaction set is one shipment of one or more than one order. Each order is represented by a hierarchical structure, with the order being the highest level and the item being the lowest.

Comment B: This transaction set is used to convey information that is normally found on a shipping/receiving document and a invoice, in a paper environment. In most cases prices are excluded from the receiving documents. Care should be exercised to keep this information from the receiving area if it is the current practice to exclude such information. It may be prudent to consult an auditor or legal representative if there is any question.

Comment C: The LX segment is used to bound the segments for the Pack and Subpack levels. It has no relevance to the application data being sent.

Table 3

Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	DM No.	Note Reference
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PAPERLESS MATERIAL INSPECTION AND RECEIVING REPORT
A Strategy to Streamline Acquisition and Reduce Paperwork

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11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

A: Approved for public release; distribution unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

The DD Form 250 – Material Inspection and Receiving Report, is used to document inspection and acceptance of goods and services. It is a widely proliferated, contractor-prepared form, with an extensive distribution list. The report explores inspection and acceptance requirements established by Defense Department acquisition regulations, documents current business practices, and suggests minimum essential data requirements for a proposed EDI system. The report contains a strategy for the phase-in of an EDI-based paperless system for some MIRR uses. Included in the report are several draft transaction set implementation conventions (mappings) which the Department could use as baselines to test a paperless MIRR concept. Converting the paper-based MIRR to an EDI-based system will provide the DoD and private sector an opportunity for a significant return on implementation costs.

14. SUBJECT TERMS

DD Form 250, material inspection and acceptance, MIRR, paperless inspection and acceptance, EDI-based MIRR, invoice, shipment notice, acquisition streamlining, paperwork reduction.

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